

The Journal of Educational Sociology

A Magazine of Theory and Practice

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EDITORIAL

"The social scientist will acquire his dignity and his strength when he has worked out his method."—Walter Lippmann, *Public Opinion*.

An article in the current number of THE JOURNAL OF EDUCATIONAL SOCIOLOGY admirably illustrates the fact that the social scientist is about the business of developing his method. To the extent that there is now in the field of educational sociology a lively interest in cause-and-effect relationships, in a desire for control over social phenomena, and in the tools by means of which the data will be uncovered, sociology may be said to have shifted its emphasis from philosophy to science. The shift in emphasis must not be construed as driving philosophy wholly from the scene, for in all science, method is a combination of skills and techniques unified by philosophy.

It is perhaps natural that the early attempts at method in sociology should seek to imitate the methods of the physical sciences. There is no warrant for believing, however, that the laws of the physical world, as we have known them, apply to social data. There is a constancy about the fact H_2O that nowhere inheres in the human behavior with which the sociologist is concerned. The difficulties of method in the social sciences cluster about this very

point; we are dealing, not with something static, but with a rapidly changing dynamic flow of events. Furthermore, every datum in social relationships can, and does, alter under our very hands. The juvenile delinquent or the manic depressive enters into the situation in ways alien to the potentialities of hydrogen and oxygen. The facts of social science are relative, which is a way of saying that they do not exist except as relationships. The present trend taking shape in the physical sciences themselves points to the recognition there of relativity, and there are those among us who are already referring to the period of relentless law and fixity which has characterized scientific findings in the past as "the naïve period of science." It is evident, then, that techniques for dealing with social data must be germane to social life, and when they are developed, they will be useless unless they take account of the essential ways in which social data differ from the data of chemistry and physics. This, of itself, postulates unfamiliar methods and tools peculiar to a special field. The sociologist has launched upon these quests with laudable enthusiasm and be it reported is making headway in his attempts.

The best answer, for instance, to one of the riddles of juvenile delinquency is a sociological finding. We have floundered in generalizations attributing delinquency to racial groups, to "environment as a whole," to the "gang age," and so on until the use of sociological techniques and method, in the capable hands of Clifford Shaw, have yielded the truth that delinquency, whatever its other ramifications, is linked to the area in which it is found. The first firm step in solving the problems of delinquency has been taken.

We have indicated that the data of sociology are alive, flexible, and changing. Nevertheless, human behavior is rooted in some basic things, some constant arrangement of patterns that are capable of scientific scrutiny. If this were not so, we could not be so glib about "human nature" as a recognizable configuration. It is likely that we shall

come to know the dynamics of interaction only by studying them in the processes of movement and fluctuation in any human life.

This will explain, if it needs explaining, the reliance of the sociologist upon case studies of which *The Jack Roller*, recently published by the University of Chicago Press, is a notable example. The scientist must know what happens before he can say why. The case study method is, as yet, the only approach to the story of what happens in complex social situations, conscious as we are of its inaccuracies and its shortcomings, but the use of this tool cannot fail to sharpen it and to improve its reliability. At this stage in advancement, we are enabled through the case study at least to *see* the same facts. The step beyond that to the common consent that is science cannot be taken except by way of these experimental, faltering evolving experiences that constitute the present science of educational sociology.

REVEALED PHILOSOPHIES—A REPLY TO PROFESSOR KILPATRICK¹

CHARLES C. PETERS

In the October number of this journal, Professor Kilpatrick critically reviewed my *Objectives and Procedures in Civic Education* in an article entitled "Hidden Philosophies." In this excellent article Professor Kilpatrick was not taking the trouble merely to criticize my little book, but was dealing with what he took to be only an extreme statement of the point of view of a whole school of educational theorists and was, in fact, criticizing the fundamental assumptions of that school. It is in this same spirit that I shall reply to his arguments; that is, I shall attempt to set forth the fundamental tenets of a philosophy of education that is not merely my own but that is held by a group of us more or less in common. If space permitted my doing so without forgoing my larger purpose, I could answer the specific criticisms of *Civic Education* in terms of the special function the book was intended to serve and the brevity with which, in view of this special function, it had to pass over fundamental principles.

OUR METAPHYSICAL BASIS

Our group has been repeatedly charged with having no thought-through philosophy of education—with being driven by a frenzied effort to be "scientific" and ending by being "only trivial." This charge has been especially urged by Professor Bode but is also implied in the title of Professor Kilpatrick's article, "Hidden Philosophies," and in his closing sentence: "An author may not see the deeper implications of his thinking."

I cannot speak in this respect for all of my colleagues, but for myself I have always been acutely conscious of the relation of my educational theories to my metaphysics, and

¹The Journal of Educational Sociology, IV, 2, p. 59.

have continually attempted to keep the two reconciled. From the days of my senior year in college, when we studied philosophy with Royce's great work on *The World and the Individual* as text, through the later years devoted to the teaching of philosophy in several "colleges," I have been a disciple in the school of absolute idealism represented by Professor Royce. It seems clear to me that the conflict between the school of educational theorists represented by such men as Bobbitt, Charters, Ernest Horn, and the Ruggs, to which I also adhere, and that represented by Dewey, Kilpatrick, and Bode, is fundamentally a conflict between two systems of philosophy. For men may belong by temperament to one or another school of philosophy even though they have never definitely articulated their metaphysics.²

The members of the Dewey school are pragmatists, either avowedly or by implication. They stress the fact that the world is in the making. If the reader will compare the stated educational theories of these scholars with the following description of the pragmatist attitude, he will see how completely their educational philosophy harmonizes with that system of metaphysics.

In our cognitive as well as in our active life we are creative. We *add*, both to the subject and to the predicate part of reality. The world stands really malleable, waiting to receive its final touches at our hands. Like the kingdom of heaven, it suffers human violence willingly. Man *engenders* truths upon it. . . . The import of the difference between pragmatism and rationalism is now in sight throughout its whole extent. The essential contrast is that *for rationalism reality is ready-made and complete from all eternity, while for pragmatism it is still in the making, and awaits part of its complexion from the future.* . . . The rationalist mind, radically taken, is of a doctrinaire and authoritative complexion; the phrase "*must be*" is ever on its lips. The belly-band of its universe must be tight. A radical pragmatist, on the other hand, is a happy-go-lucky anarchistic sort of creature. If he had to live in a tub like Diogenes he wouldn't mind at all if the hoops were loose and the staves let in the sun.³

² William James, *Pragmatism*, Longmans, Green, and Co., 1907, Lecture I.

³ *Ibid.*, pp. 256-260.

The educational philosophy of our school squares equally well with the philosophy of absolute idealism. It is not easy to compress into a statement short enough to permit quotation in this article a description of the idealistic point of view, but it is reasonably well set forth in a few lines clipped from a poem by Paul Carus, "A Prologue to Truth."⁴

Truly, the measure of all things is Man;
But Man is measured by the One and All.

Man is a microcosm, and he grows
Unto the stature of full manhood, only
When to the One and All his soul responds.
There is a gauge that measures man, a norm
By which the truth that's in him must be tested.
'Tis the eternal in the change of time,
It is the Law, the Uniformity,
It is the One in this great All,—'tis God!

"Truth changes," sayest thou, and thou art right,
E'en man himself is changing with his truth.
Both change! for nothing is at rest
In this corporeal world of flux. And yet
Things transient mirror the Etern which always
Keeps faith unto itself and its own law.

To put the matter in more prosaic terms, *we* do not find the world, as we look about, quite so chaotic, so shifting, and so capricious as the pragmatists tell us that it is. We find that change is fairly likely to take the form of evolution rather than of sudden breaks; that law obtains, certainly in the physical world and probably also in the social world; that advancement comes, in our industrial processes and in our social institutions, not by some strokes of magic but gradually and by steady pulls towards ends that we have envisaged. "The bellyband of our universe is," we confess, somewhat "tight." This does not imply in the least that our world is fixed at a certain status or that we should wish to maintain it in its *status quo*. But it does imply that we must work for a better state within a

⁴ Paul Carus, *Truth on Trial*, Open Court Publishing Company, 1911, pages 1-2.

world that is rational, and that in this pull for a higher order we can get sense of direction from a systematic study of the order in which we live.

FORECASTING

What has just been said puts in proper perspective the charge that has been so often hurled at us—that our techniques of curriculum construction tend merely to fix society in its present imperfect state—that *it is impossible for science to do anything else than merely describe what is*. It is certainly unfair to say that the members of our school have sought merely a scientific description of what now is and have set this up as a picture of what ought to be. We have all been interested in trends. Harold Rugg has concerned himself with what pioneer writers have done as a criterion for values; Bobbitt has had his respondents make job analyses of citizenship and of other functions when these functions are performed at their best; Washburne studied the persistence of references in reading through a long period of time; my own blue prints of social efficiency have always turned on how the “better” differ from the “worse.”⁵ But we have tried to keep our feet on the ground in studying these trends. Instead of merely projecting into the future our own evaluations, shaped by casual observations and fortuitous social contacts (for all philosophies rest upon observation, casual or systematic), we have tried to hold ourselves to reality by controlled inductive processes. Our procedure has not been unlike that of the mathematician when he fits curves to observed data. He systematically studies the data already present for the apparent law of their trend. Upon these given data he fits a curve that seems best to describe the trend. Then he extrapolates beyond his observed points. Any mathematician will tell us that extrapolation is a dangerous process, and the more so to the extent to which one goes far beyond his last observed point, but if one must

⁵ See *Foundations of Educational Sociology*, revised edition, pages 158-162.

predict at all it is certainly safer to do it in the systematic manner in which the mathematician works than in the capricious way represented by the aspirations of the philosopher.

It is true that our techniques for isolating trends as they relate to educational program-making are pathetically crude at present. The existence of a science in this respect is at least ninety-five per cent aspiration and not more than five per cent realization. But to develop such techniques for isolating trends as the basis for educational program-making is the very heart of our problem, and some of us spend not only our days but the waking hours of the night alertly courting hunches that may lead to the refinement of such techniques—a few of which hunches prove promising and many foolish.

Any disciple in the school of metaphysics to which we belong must perforce, if he is to follow out the implications of his philosophy, do just as we have been attempting to do—stand aside and observe the ongoing of life, try to catch the logic of its development towards the realization of its fundamental purposes, and then throw himself into the creative effort to attain and to develop these inherent purposes.⁶ If he has the scientific temper he will merely bring to the aid of his observations and reflections those techniques for systematizing observation, for holding in check the momentum of his personal equation, and for preventing generalizations from overshooting the mark that jointly we call the scientific method.

RECURRENCE OF PAST SITUATIONS

But, in spite of all this philosophizing about trends with a certain logic in them, *do* the situations of the past recur in the future in such forms that education could prepare "preadjustments" for them? Professor Kilpatrick raises this question, and goes on to ask:

⁶ See *Foundations of Educational Sociology*, revised edition, pages 159-160. For an effort at a technique of predicting, though in a little different application, see chapter XX of this book.

Or it may be objected that "preadjustment" is not the right term or concept to use? Considering life as we know it, are "preadjustments" the way of meeting it? Do we not rather need an intelligent grappling with events as they come? Could any aggregate of such "preadjustments" (contrived by somebody else's prechoice and predecision) without intelligent readaptation enable one to grapple with life's succession of difficulties?

And he replies, quite truly, "If we consider the *total* content of the stream, no one cross section ever exactly repeats a preceding. In very literalness each successive total content of experience is novel."

Not only do we agree with Professor Kilpatrick in this statement and the others he makes on this same point, but we hold that he does not go nearly far enough. Not only do *total* contents never recur in exactly the same way but neither do *details*, however simple. Even so apparently homogeneous an act as striking the letter *a* on a typewriter is always an individual act—different each time from what it was before. For the act fits into a different background by reason of differences in the temperature of the room, or surrounding noises, or the context in which the letter occurs, or by reason of the motive for writing it, or at least by reason of the fact that time has elapsed and the person performing the act has grown and changed. There must be some adaptation, some transfer of training, in the application of every bit of training one has occasion to use, however simple or however complex.

In what sense, then, can one be equipped with preadjustments for meeting the problems of life if these are always novel? The answer is that they are not *wholly* novel. The "makings" of an effective response have occurred in previous responses. I agree so fully with Professor Kilpatrick's exposition of this matter (pages 64 and 65 of his article) that there is no need for my illustrating it. Except that he does not do sufficient justice to the possibility of the recurrence of synthesizing techniques as elements. To carry further his illustration, not only can one draw upon his elementary abilities to walk and to

recognize streets and motor-car movements as elements in avoiding an on-coming car, but he can also use analogies from the past as to what the motorist is likely to do, what types of avoiding response have proved safest in somewhat similar situations, what consideration of the motorist's rights the pedestrian's ideals have set him for observing, etc. All these elementary tools and their combination into total responses the subject has practised in somewhat analogous situations in the past. When confronted with the present crisis they come flooding in upon him as resources. In fact these resources come to him in greater abundance than he can use; he must choose among them.

This choice is the very essence of his selfhood. To be sure, it is largely a matter of chance—of trial and error—in such a case as Professor Kilpatrick uses in his illustration—avoiding an on-coming automobile. But in many cases it is a choice made after due deliberation. In making this choice to meet the novel element in a situation one takes his own risks, and the outcome is some addition to reality; the person has created a new element in his character and in the configuration of the universe. But the thing to notice is that *no education is possible for the meeting of this novel element*. We are no better off if we depend upon training through "spontaneity" than if we depend upon "blue prints." The novel must be met in the trial-and-error spirit. No amount of "resourcefulness" accruing from living in a rich environment, no amount of experience in "grappling with one's own problems," no self-confidence coming from experience in independent acting, no habits of initiative resulting from opportunities for leadership could be in any sense a preparation for it. For if these are applicable, they are applicable as acquired techniques that we as "blue printers" could have isolated in our consciousness and the growth of which we could have intentionally stimulated; they would be tools accruing from previous experiences, not novel responses to a novel situation.

All, then, that any education can do to equip a pupil to meet the problems of life is to see to it that he comes to possess, through preliminary practice with analogous situations, many resources which he may bring to a focus around his own choice in reacting upon the necessarily novel situations of the future. It is these resources that I cover by the term "preadjustments." I am under no illusion about their flexibility or about the fact that they always involve a creative element. But if we have done our part as teachers the creative element will be relatively small. The educand will have at his command all the resources that civilization has accumulated so that he will not be forced to waste his strength creating (on a trial-and-error basis) what merely duplicates previous creations but may plunge forward effectively into genuinely new conquests. The proportion drawn from the past, both in respect to tool elements and to techniques for their synthesis, is so large in comparison with the adaptations that must be made that it seems to me worth while to take advantage of the connotation of foresight that the term "preadjustments" involves.

INDOCTRINATION

But that *we* as teachers assume some responsibility for what these preadjustments shall be is the pet aversion of our critics. That involves *indoctrination*. Our only defense is the claim that *there can be no education without indoctrination*. Any implication to the contrary rests upon educational mysticism. In order to explain and defend this rather radical thesis we must make a hasty review of some basic facts about the nature of learning and of teaching.

To be trained involves the possession of those resources, mentioned above, upon which one draws as hypotheses in the presence of a situation calling for action. To be *well* trained involves possession of resources as many-sided as the problems are varied that one will be called upon to

meet, together with the conditioning factors that make for the facile recall of these and for their effective adaptation to the changing situations. Where does one get these resources? Partly by a trial-and-error process on the motor level and partly by a trial-and-error process on the mental level. More concretely put, one learns to practise kindness to others in part by mingling with others and finding the greatest net satisfaction from practising kindness to them; or one's necessarily meager experience in practising kindness of particular kinds to persons in his physical environment may be extended by hearing accounts of deeds of kindness to other people and in other situations in which he now lives bodily. In this realm of imagination he is living vicariously. And to the factors in this larger environment constructed in his imagination he is adjusting himself, and thus preparing responses that are likely to return to him as resources, just as if he made the responses in a motor way in his physical environment. This same thing is true if the ideational experience takes the form of deliberation (of thinking) rather than of following a narrative. Here one traces out one hypothesis after another, following out their expected consequences just as one might follow a train of real events, only here the tracing goes on in the realm of ideas. If others are with one matching ideas, they may direct attention to hypotheses and their implications of which he would not have thought, or they may open his mental eyes to obstacles to other hypotheses which would have escaped him alone. All learning invariably takes this form of motor or mental trial and error in search for adjustments that best meet the situation. All teaching takes the form of helping one to discover and trace out hypotheses he would not have found so quickly alone, or of calling his attention more quickly to the inadequacies in his hypotheses than he would have found them alone; that is, so to *condition* the environment as to fore-shorten the process of trial and error.

A child, then, is indoctrinated in every moment of his learning, for with each bit of action, motor or mental, he seems to find that a certain way of meeting this type of situation is the effective (satisfying) way. He is, thus, set for meeting that type of situation the same way a second time. And that holds just as truly for the practice of certain techniques of leadership, or resourcefulness, or other "creative" activities as it does for finding that a pry is a good device for lifting a heavy stone. One cannot have an experience without forming from it a conviction, a point of view, a tendency to act and to value in a certain way. One gets, thus, indoctrinated even if he reacts alone in his physical environment. But, lest you say that is stretching the meaning of the term, we shall let that pass. Certainly every time one talks with his chums on the street he is getting indoctrinated, for the impingement of their ideas on his somewhat affects the balance of his convictions and evaluations. To talk, therefore, about keeping a child free from indoctrination is absurd. The only question can be: Who shall be the teachers to indoctrinate him?

There is a strange (but excusable) notion among our critics to the effect that to indoctrinate a child means to "put something over on him"—something false and malicious. That is far from the truth. The teacher who is engaged in a proper indoctrination is merely attempting truly to describe the world. The child is likely to see but a fragment of life; he finds what he thinks are effective ways of doing things, but they may be effective only because his little world is an unbalanced sampling of the whole; they may be such as will break down in "the great society." The teacher merely tries to make the pupil's world a normal sampling of the whole—a true "society in miniature."

And what, pray, can a teacher do who refrains from indoctrination? She could not arrange the playground, nor select the composition of her social groups, nor place about the premises books describing Japanese life, nor do anything else that might in any way bring it about that

pupils would confront an environment (whether physical, social, mental) at all different from that which they would have met at home. For such enriched environment, set up in such a way as to reveal a wider range of life than the accidental one, would indoctrinate the pupils. A teacher resolved to do no indoctrinating could be only a janitor—to stay around and see that no one gets hurt and no one spoils the grass.

Our critics seem to think that if only we would let our pupils alone and not indoctrinate them they would grow up fresh and open-minded and show us the way to a better society. If we refrain from doing anything whatever about a child's provincialism, will he grow up free from provincialism, with equal love for all the social groups and nations of the world? If only we as teachers do not indoctrinate him with conservatism, will he come out open-minded, loving prophets, always ready to change the conventions of society? Not that I ever noticed. The most provincial and conservative people we can find are those most let alone by teachers, those who did their learning from the members of their clan and from their own instinctive promptings. Compare with these those persons whom a wise teacher managed—staging for them opportunities for diversified social contacts, having them hear about all sorts of people and all sorts of points of view, bringing to their attention the fact that every question is likely to have two sides, inspiring them by example and by story-telling with admiration for open-mindedness and progressivism and hatred for bigotry and fear, helping them to grow into techniques of self-criticism and of constructive leadership, never imposing convictions upon them by an *ipse dixit* but always matching ideas with them in a frank and honest search for truth—always with an eye to having realized in them the spirit and the habits of growth (indoctrinating them, that is, with these attitudes and techniques of open-mindedness and creativeness). What odds will you give me if I stand ready to bet that

these indoctrinated pupils will be more likely to create for us a better social order than will those who are let alone?

By this time the reader will surely have become convinced that there cannot after all be any great difference between our school of educational thought and that of Professor Kilpatrick. We have a philosophy back of our educational theories which is not "hidden" nor jumbled; we are concerned to remake the future, not merely to fix the *status quo*; we recognize that the outcomes of all learning must be capable of adaptation in very flexible ways, not the mere antics of a jumping jack; we greatly value creativeness and plan to pay the price for achieving it among the desiderated abilities for which we work; we recognize the only basis for learning to be the self-activity of the pupil. All these things are also planks in Professor Kilpatrick's platform. But the two schools differ in the placement of stress. *They* stress the activity of the child, the need for his spontaneity, the fear lest adults dwarf his personality by an authoritative imposition of their own *mores*. *We*, while also caring for these same things, place the stress on telic efforts to have the pupil face in the process of his living a truly representative sample of life so that he may advance towards the future with habits and techniques for meeting the problems of life which there is reason to believe will prove adequate to the strains that will be placed upon them.

THE TECHNIQUE OF RESEARCH IN EDUCATIONAL SOCIOLOGY

THOMAS O. BURGESS

A survey of research in the field of educational sociology shows that the methods of attack, the techniques of research are almost as numerous and varied as are the problems investigated. Further analysis shows, however, that there is much overlapping of the methods used. It is the purpose of this article to present a critical summary of the techniques of research employed.

The technique of research used in the field of educational sociology may be thought of as coming under two headings: methods of getting materials and methods of handling them. The former may be divided into five distinct types; namely, (1) document; (2) observation and visitation; (3) experimentation; (4) consensus or collective judgment; and (5) questionnaire. The latter presents four types; namely, (a) description; (b) analysis; (c) comparison; and (d) synthesis.

The document method shows that the source material¹ collected by this technique may lend itself to four different methods of handling. Research using documentary source materials may be treated separately by (a) description, (b) analysis, (c) comparison, or (d) synthesis of the source materials. In addition to this, the document method may also embody any combination of these four methods of handling.

In like manner, source materials collected by the other methods listed may be treated in a manner similar to that mentioned for the "document." Also various combinations of methods of getting materials may be made with one or more of the methods of handling.

Each of these five techniques (methods of getting ma-

¹ Source materials are collected and used in an attempt to reconstruct the past or to understand present problems, situations, and institutions.

terials) is made up of one or more subtechniques and the latter in turn vary with the phase of the field of educational sociology in which the research is conducted. For example, a study of the types of technique of research used by individuals or committees in curriculum construction would come under the document method,² for that type of study would of necessity have to be made from published reports. The experimental method, as a further example, embodies three ways of getting materials: classroom experimentation, by which data may be collected concerning such a problem as the relative merits of the socialized recitation versus the ordinary type of classroom recitation; laboratory experimentation, by which source materials may be gathered pertaining to such a study as teacher coöperation in the administration of a high school, using the entire school or just a single classroom as the laboratory; and test construction, that is the compilation of data relative to pupil performance resulting in the construction of a social efficiency or other test. As pointed out for methods of getting materials, methods of handling materials may in like manner be subdivided into subheadings for each technique.

METHODS OF GETTING MATERIALS

In compiling a critical summary of the technique of research employed in the field of educational sociology, the writer selected some three hundred varieties of method and combinations of method from the published reports of studies falling in this field. From this set of carefully selected sample studies, the five types of technique discussed below were arbitrarily determined. No special significance attends the order in which they are placed or the number of divisions made. The writer is fully cognizant of the fact that there is much overlapping of the types of technique as they are here presented. In addition to presenting

² The selection of facts and other items from records, published reports, and other printed or written sources.

the representative methods employed and bibliographical references to sample studies, an attempt is made to criticize the method of each type and to point out its limitation. A discussion of techniques follows.

I

Technique: Document (the selection of facts and other items from records, published reports, and other printed or written sources).

Example: Brigham, Carl C., *A Study of American Intelligence*, Princeton: Princeton University Press, 1923.

Criticism of method: Bits of research coming under this heading are usually status studies. Marked contributions have been made and are being made by using this method. It must be remembered that the value of the contribution based upon this method of getting materials is in direct proportion to the authenticity of the sources used. The method has this advantage, however: It attempts to procure its elements from sources which have withstood the test of one or more revisions and scrutinizings.

Limitation of method: Since the technique confines itself to set sources for its materials, it may preclude the possibility of including any new items relevant to the study.

II

Technique: Observation and visitation (the securing^a of data by means of personal observation and visitation).

Example: Alltucker, Margaret M., "Is the Pedagogically Accelerated Student a Misfit in the Senior High School?" *School Review*, 32: 193-202, March, 1924.

Criticism of method: In the hands of trained workers, data collected by the visitation and observation method are very high in their accuracy and pertinency. Prior to carrying out a bit of research by this method the workers usually have their plan of attack fairly well outlined and know just what data they desire. If the research is to embody the use of tests and measures and is in this instance also carried out by trained workers, the data thus obtained are quite objective and accurate providing the tests used are conducive to objective scoring.

Limitation of method: The term "observation" itself suggests the possibility of the data being somewhat unsuitable due to the subjective element which would creep in. Even with expert observers, personal bias may enter and skew the results of the investigation. Tests and measures are usually far from perfect and do not always measure what they purport to.

^a The collection of data by personal observation and visitation may involve actual measurement, usually objective, or it may be that the particular information desired may be derived from original records. For example, if one desired to obtain the total educational expenditures of a year for a specific purpose and one examined the records of the school in order to ascertain this information, the procedure would be properly described as collection of data by personal observation.

III

Technique: Experimentation (the securing⁴ of data by means of experimentation).

Example: Sackett, S. F., "An Experiment in High School Democracy," *Educational Review*, 67:262-65, May, 1924.

Criticism of method: Of the various methods listed in this study pertaining to the technique of research employed in the field of educational sociology, the experimental method as to utility perhaps ranks first. Educational sociology is interested in new and better ways of fitting an individual into and also improving his environment. The most rapid way to learn the best additional methods of doing this is to set up the conditions desired and through experimentation learn the virtues of one method as compared to one or more other methods.

Limitation of method: Any experiment of this type wherever conducted is artificial. As soon as conditions are controlled and measured or otherwise handled, the research becomes a laboratory experiment instead of one in an actual life situation (and must be interpreted as such).

IV

Technique: Consensus or collective judgment (the consensus or collective judgment of a number of specialists in a given field).

Example: Mitchel, Claude, "Pupils' Standards of Judging Citizenship," *School Review*, 33:382-386, May, 1925.

Criticism and limitation of method: This method presents a great economy of time in carrying out an investigation. In many respects "armchair" analyses are almost an essential forerunner to any objective bit of experimentation. There is danger, however, of experts giving snap judgments in respect to the problem under investigation. It is generally accepted that the use of expert opinion, even when all the facts are available, is merely an approximation. Furthermore, the value of expert opinion is in direct ratio to the familiarity of the expert with all the conditions involved.

V

Technique: Questionnaire (the questionnaire⁵ used for the selection of facts and other source material items).

⁴ Usually the purpose of experimentation in the field of educational sociology is to determine the effect of the operation of certain factors upon each other. For example, if one sets up an experiment for the purpose of comparing two methods of student government, his purpose is to determine the relative effect of the operation of the two methods of administration specified. Two types of school instruction may also be compared by experimentation to determine the relative effect of the operation of the two methods of instruction specified. In the later case, usually two successive measures are required—the first being for the purpose of determining present status or status under normal conditions, and the second for determination at the end of the experimental period.

⁵ This technique includes the securing of data by means of formal questionnaires, or by means of correspondence, or even by means of a blank to be filled out by the members of an audience.

Example: Laird, Donald A., "The Careers of the College Student," *Pedagogical Seminary*, 30:347-358, December, 1923.

Criticism of method: The questionnaire is a very adequate tool to use when masses of material of great proportions or methods of analysis of great laboriousness are involved, for it shortens labor without encountering serious danger of error in analysis. The questionnaire is not satisfactory in yielding more than a preliminary list and is recommended for use only in extreme cases.

The compiled results of a questionnaire, unless a return of approximately 100 per cent of the sampling is secured, are not reliable. Questionnaires are usually answered only by those who are interested in the problem and in this way the results present a biased viewpoint. Answers to questionnaires are often indefinite and ambiguous.

Limitation of method: The written questionnaire is intrinsically difficult to fill out; the questions may not be clearly understood by the one who answers; the same misunderstanding may occur when the sender interprets the answer; the sampling may be poor; questionnaires are often answered by people who do not give exact facts; and, at the present time the method is used so much that people to whom the questionnaire is sent feel resentment when called upon to fill out the blank.

METHODS OF HANDLING MATERIALS

As stated above, the technique of research employed in the field of educational sociology may be thought of as coming under two headings: methods of getting materials and methods of handling them. It is the purpose of the discussion which is to follow to treat the topic of "methods of handling" the collected data, in a manner similar to that employed for the "method of getting."

I

Technique: Description (the giving^a of an account of the parts of a problem).

Example: Johnson, Franklin W., "The Educational Activities of the Young Men's Christian Association in New York City," *Teachers College Record*, 25:125-133, March, 1924.

Criticism of method: The descriptive method is a very adequate means of reporting a bit of research, particularly when masses of source materials of great proportions are involved, for it crystallizes the whole into a series of summary statements. In addition to this, these summary statements lend themselves to being accompanied by conclusions which greatly enhance the worth of a study.

^aThis method embodies the act of furnishing a rational explanation of the parts of a complex whole. It may also include an interpretation and elucidation of the items being considered.

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Limitation of method: In order to secure the best results, the technique of description must be employed only by those well versed in the field of educational sociology in order to present the findings with the proper connotations. Even in the hands of experts and trained workers biased judgments may tend to present the findings in an unscientific manner.

The descriptive method omits to a great extent the presentation of the data in their original form. This deprives the reader of drawing any other conclusions than those set forth.

II

Technique: Analysis (the separating⁷ of a problem into its parts).

Example: Davis, C. O., "The Training and Experience of the Teachers in the High School Accredited by the North Central Association," *School Review*, 30:335-54, May, 1922.

Criticism of method: The problems which come within the scope of educational sociology are all so complex in their nature that it is almost impossible to cope with them without first making a thorough analysis of each. Because of this the technique of analysis may be considered as the leading utilitarian technique of the four classified in this study.

Unless in the hands of experts, bits of research data treated by analysis may be carried out in a perfunctory and incomplete manner. Even when this condition is met, the subjective element which enters into the majority of analyses which cannot be carried out by objective means results in only an approximation.

Limitation of method: It often happens that an analysis results merely in a philosophizing—a theorizing relative to what is believed to be the conclusions which should be drawn from the integral parts of a problem which have been severed for the purpose of study.

III

Technique: Comparison (the examining⁸ of two or more problems with reference to points of likeness and unlikeness).

Example: Holley, C. E., *The Relationship between Persistence in School and Home Conditions*, Fifteenth Year Book of the National Society for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Company, 1916, pages 39-86.

⁷ The term "analysis" as used in this monograph does not refer to mere mechanical separation. Analysis, in its broader sense, is the reduction of a compound or organism to its elementary constituent forms or substances. In educational sociology, however, analysis may be defined as the mental separation of qualities, or of parts according to function. Analysis is made for the sake of a new synthesis. Further, the technique of analysis may be conveniently classified into (a) logical and (b) statistical.

⁸ This method may also embrace the examining (of two or more items within a problem) with reference to likeness or unlikeness; placed together, mentally, so as to perceive similarity or dissimilarity of relations; or to note or call attention to the relative resemblance or difference.

Criticism of method: Historically, the technique of comparison was one of the first methods of handling data. Ancient history tells us how kings sent out runners to learn the strength of the opposing enemy in respect to numbers and this number compared with his own strength measured numerically, etc. The technique of comparison is not difficult to apply because of the simplicity of its operation. This is especially true when data which have been treated statistically are presented for comparison. Data are often unreliable⁹ (for comparative purposes) both absolutely and relatively.

Limitation of method: The terms "comparison" and "subjective" are most synonymous even in the hands of experts called upon to detect likeness and unlikeness with reference to two or more problems. In other words, the factor of personal bias must be taken into consideration when interpreting the findings where the technique of comparison has been applied.

IV

Technique: Synthesis (the putting together¹⁰ of two or more elements into a new form).

Example: Bobbitt, Franklin, Curriculum Making in Los Angeles. Supplementary Educational Monograph, No. 20, Department of Education, University of Chicago, June, 1922.

Criticism of method: The greater the number of elements available for synthesis the greater the number of new forms which may be created. In other words the technique of synthesis approaches a limitless utility as the number of elements to be synthesized increases.

Limitation of method: The method is subject to the errors or peculiarities of individual judgment. The person making the synthesis has a tendency to point out what he thinks should be the final product instead of pointing out what really is the final product resulting from the synthesis.

⁹ In this connection one point should be noted, however, that educational data collected from the larger cities are most reliable because they usually have the most thoroughly equipped accounting and statistical staff supervised by experts.

¹⁰ Synthesis, as used in this discussion, does not mean a mere putting together mechanically. We analyze in order that we may classify; but all classification is synthesis. What is commonly called abstraction is only a form of analysis; and abstraction is preliminary to generalization, which, in turn, is synthetic. In short the purpose of synthesis is to summarize the findings into a single meaningful statement.

FORERUNNERS OF MODERN SOCIOLOGY

M. C. ELMER

The trend that sociologists have taken, especially during the last seventy-five years, is so familiar that it is not necessary to mention its particular emphasis. In fact, so much consideration has been given to a small group of students of social phenomena, that it is felt by some that to step outside of that charmed circle is *lèse majesté*.

I am going to call attention to a line of sociological development, which is more definitely the forerunner of the sociology of 1930, than the remarkable contributions made, especially in America, since 1875. I do not claim that the point of view, and the methodology of today are more important than that of the period through which we have just passed, but they are different. And since sociology is no longer confined to the activities of a small group of men, whose interests center them around one set of concepts, we may be permitted to consider the contributions of men who have not been labeled, classified, and filed.

Our undue emphasis and repetition of certain names and the special contribution of a small group of social philosophizers has at times left the impression that sociological interest and thinking was limited to the men about whom the contributions of each period are focalized. Likewise, there have been many individuals whose chief contribution was in some recognized field, but whose apparently secondary interest was in an undeveloped field and hence frequently was lost for a considerable period. Because of the recent trends in the development of sociology I am going to call attention to some contributions which are in line with much of our present-day sociology.

The particularly outstanding emphasis at the present time is the analysis of social phenomena by means of objective data. There have been significant attempts along

this line ever since the 16th century. Some of the work done was so similar to that of modern sociologists that with the change of a few terms it might readily be taken for the work of some one of our contemporaries. The collection of statistical data has been carried on in some form from times as early as we have any records, but the attempt to interpret group activities and their interrelationship by means of such data is of comparatively recent date.

One of the earliest attempts to interpret group activities in objective terms was the *Cosmographia*, which was published between 1536 and 1544. This was an effort to explain the varying activities of different peoples on the basis of history, state organization, church relations, laws, customs, and manners. This extensive work was done by Sebastian Muenster¹ (1489-1552), a Franciscan, but at the time of this work a Protestant professor at Heidelberg and Basle. The work in its approach was not so fundamentally different from present-day regional sociology. He lacked, of course, the aid of modern psychology in his interpretation. As a matter of fact, the irregular progress along any line is due to the need of supplementary data and development in related fields. When any interpretation has used up all the supporting data, the theory begins to lose its force.

In 1562, there appeared another work which is of significance to sociologists. This was by Francesco Sansovino (1521-1585). It dealt with the laws and customs of the leading European and Mediterranean countries from the viewpoint of their relation of laws and customs to the activities of the people. This was decidedly more in line with our present-day cultural approach to the study of society, than the social philosophies of the 19th century we usually cite, chiefly because they used the term sociology. Just as we have waves of interest at the present time, so we find them at earlier periods. The work of Muenster and Sansovino was followed by many interesting and valu-

¹See August Meitzen, *History of Theory, and Technique of Statistics*, 1891.

able statistical works, but they did not bear any particular similarity to our present attempts to study social phenomena.

In 1577, there appeared *Les Six Livres de la République* by Jean Bodin. These were summarized and appeared in 1615, without citation, in writings of Montchrétien. Bodin contended that a knowledge of facts obtained by enumeration should give a basis for the control of vagabonds, loafers, and robbers, provide for adjustment of grievance of the poor, substitute facts for rumors, appease complaints, and suppress all occasion for riot. Bodin was beginning to sound a new note. As Hankins has said, "Bodin was a definite symptom of the passing of the Middle Ages."

In 1660 at the University of Helmstedt, Hermann Conring (1606-1681), a recognized leader in medicine, philosophy, history, and law, introduced a series of lectures on *Universitätswissenschaft*. In these he dealt with the so-called noteworthy peculiarities of the state, and the forces within the state (*Staatsmerkwürdigkeiten*). Conring did not collect his data, but used data of Bolero and J. A. de Thou. Conring demanded more than mere description and factual data. He attempted to find the causal connection.² While Conring does not play a significant rôle as a statistician, the field in which he is usually considered as a forerunner of modern sociology was important. His line of approach was copied and followed extensively throughout the 17th century, and became a phase of the work of the so-called Kameralisten.³

Another early contribution to present-day sociology must be credited to John Graunt (1620-1674), a dry-goods merchant of London. In 1662, he published a work entitled "Natural and Political Observations upon the Bills of

² See V. John, *Geschichte der Statistick*, Part 1, page 52.

³ E. G., Thomasius of Halle and Otto of Utrecht. Also followed in the lectures of Oldenburger (Geneva), 1668, Herz (Giessen), Bose, Sagittarius, Schubart (Jena), and Beckmann, 1673 (Frankfort-on-the-Oder). See Meitzen, *History of Theory, and Technique of Statistics*, page 22.

Mortality, with reference to the government, religion, trade, growth, aim, diseases, etc., of the city of London." Graunt's chief contribution was that the seemingly unimportant matter of birth and death rate merited the closest scrutiny by governmental authorities. Graunt was likewise an early contributor to the phase of sociology known today as human ecology. He attempted to show for example, that there was some relationship between the frequency of suicides and the section of the country, seasons, occupations, and business conditions. From a study of death records, he concluded that death rates were fairly constant, and that the population of a country could be estimated from a study of the death rates. The present refined methods, used in the study of demography, are developments of principles presented by John Graunt.

In 1687-1691, Caspar Neuman collected notes on 5,869 deaths in Breslau, in order to prove that it was superstitious to ascribe any particular significance to the seventh and ninth year in the expectation of life. Edmund Halley, the astronomer, made a further study of these data, and worked out his "Estimate of the Degrees of Mortality of Mankind." Halley's mortality tables, which have now been refined so that life insurance is today based on scientific principles, was a further step in John Graunt's principles of demography.

Probably the most definite tendency in the sociology of 1930 is the attempt to measure social processes, and to analyze society in definite terms and measurable and comparative units. The trend has been away from the social philosophers who helped sociology to become established as a university discipline. Today we are struggling in our research, and in our teaching with the same type of problem William Petty, a physicist and physician (1623-1685) tried to solve. While his *Political Arithmetick* was largely a discourse dealing with the statistics of the extent and value of the holdings of Great Britain and her neighbors, Petty was a pioneer in the field and one of the

first to insist upon an exact terminology. Petty like the modern sociologist was continually confronted by the need of an exact terminology whenever he attempted to measure social phenomena statistically. He criticized the use of terms such as *larger*, *much larger*, *many*, *more*, *less*, and similar terms, and attempted to eliminate individual opinion and individual bias and establish the use of *objective standards*. Today much of the work done by sociologists and much of our teaching in sociology is based on the work of Petty more directly than on the work of the sociologists of the 19th and early 20th century.

Basing his work on the authority of Conring, Graunt, Petty, and their co-workers, John Peter Süssmilch (1707-1767), a military chaplain, attempted to apply objective standards to the study of *Reflections on the Divine Order in the Changes of Humanity as Indicated by Births, Deaths, and Propagation*. (*Betrachtungen über die Göttliche Ordnung in der Veränderungen des menschlichen Geschlechts aus der Geburt, dem Tode und der Fortpflanzung desselben erwiesen*). While he did not succeed in statistically establishing the "divine order," he did succeed in attracting attention to the value of *quantitative data in establishing principles involving social change*, and with very little modification in his approach, he could be mistaken for a sociologist in the United States of America in 1930. He was likewise a forerunner of the social-welfare worker. Much of his work was an attempt to prove that by properly adjusting our lives and manner of living, the death rate might be reduced and the average duration of life increased. Süssmilch is to a large extent the 18th-century representative of our present group of students of population problems.

The middle of the 18th century marked a period when the present approach to the study of sociology *almost* blossomed forth, but later the emphasis was turned to pure statistical theory instead and for a time became so barren of life that even supporters thereof felt that there

was no practical value in its development. However, Gottfried Achenwall (1719-1772), is probably the outstanding man in this period, of a close approach to modern objective methods of studying social condition and activities. Like Conring, one hundred years earlier, he defined his field of study as the analysis of *Staatsmerkwürdigkeiten*. That is, the aggregate of what is remarkable about a state. He held that the structure, characteristics, and functioning of a state could be analyzed and the data classified for study. With undue emphasis upon the mathematical side of the work of Achenwall, statisticians began to believe they could foretell the trend of events by means of their objective studies. Europe was in a rather unstable period, and the supporting fields of economics, psychology, and history were on a less scientific basis than is the case today. As a result, discredit was brought upon their efforts, and the sociological interpretation based upon objective data played a continually lessening rôle during the next fifty to seventy-five years. The old teaching died out with the teachers and by the beginning of the 19th century it was doubted whether statistics would ever have any scientific value.

It is interesting to note, that just about the time that Comte was beginning to sound a note that would dominate the song of sociologists for the next seventy-five years, there appeared another, whose work would become significant when Comte's work was largely completed. Between 1821-1833, M. de Guerry de Chantneuf completed a remarkable study which he called "Statistique morale de la France." At the time this appeared there were some by whom its significance was recognized. Concerning it, Sir Henry Lytton Bulwer, wrote in 1834, "It bowls down at once all the ninepins with which the late statists had been amusing themselves, and sets up again many of the old notions which from their very antiquity were out of vogue." In other words he revived with fresh contribution the principles which, Muenster, Sansovino, Bodin,

Graunt, Petty, Süssmilch, and Achenwall had been approaching the study of society. Guerry de Chantneuf took particular phases of life concerning which erroneous ideas were afloat, and made careful studies of the data available. In his analysis of crime, suicides, illegitimacy, and similar phenomena, he was so far in advance of most sociologists who followed him that it has been only within the last twenty years that we have made specific investigations and regional studies and surveys along the lines he proposed. He lacked an *understanding and interested audience*.

Within the past ten years there have been many studies of the distribution of crime, of suicides, and of illegitimacy, as affected by age, sex, occupation, social status, and spatial relationship. Most of these studies have come to the same conclusions reached by the extensive studies of M. de Guerry de Chantneuf,⁴ although his works are quite generally unknown, since he is not recorded as a sociologist, but as Director of Affaires Criminelles, in the French Ministry of Justice.

Need I mention Quetelet? He has long been recognized by sociologists for having contributed much to the use made of statistics. In 1835, Quetelet confirmed the view, that constant factors and conditions are determinants in the study of social phenomena, as presented in the essay on the moral statistics of France by M. de Guerry de Chantneuf, in 1834.⁵ Quetelet called attention to man's activities, which may in turn be determined statistically if studied in relation to environment. Further, that these environmental conditions may be modified, with a consequent modification in the acts. He rather definitely established the principle of social responsibility.

I have attempted to call attention as briefly as possible

⁴It is interesting to note that the few references to de Chantneuf speak of him rather familiarly as Guerry but do not enlighten us to any great extent. In another paper I expect to present some of his interesting maps and charts on the distribution of crime and suicides in France from 1821-1835.

⁵See August Meitzen, *Geschichte, Theorie, und Technik der Statistik*, Berlin, 1886.

to some of the forerunners of the present approach to the study of sociology. Due to the lack of the supporting data of history, economics, biology, and psychology, the analyses did not reach the degree of reliability now possible. There appeared an era of social philosophy which flourished almost up to the present time. Today our treatment of social phenomena is more nearly in line with the men I have mentioned than the equally able men we usually cite as the founders of sociology.

HOW THE NATION MAY BE TRAINED IN SOCIAL THINKING BY HISTORY TEACH- ERS: A NEW TECHNIQUE FOR INDI- VIDUAL AND COLLECTIVE REA- SONING

LOUIS W. RAPEER

I. NEED OF A METHOD TO DEVELOP THINKING ABILITY

Social imitation accounts for the methods used by American teachers. Teachers grow up in schools; and they teach as they are taught. In most instances, any given method or device of teaching comes by direct descent from very remote ancestors in some darker age. The methods of teaching history have been variations of "backing the book," reading aloud to the teacher or reading silently and later reporting. Frequently history is celebrated as the driest subject of the program of studies; and any one who has sat through many history recitations in elementary school, high school, or college, will be ready to agree with Alice that the best use of some texts is to "dry the wet company about the pool of tears." Certainly the methods and texts derived by direct and unconscious imitation fail largely to help teachers attain any reasonable goals for the teaching of history.

But by far the greatest hindrance to success in teaching history in such a way as to make children social minded and able to think socially is probably our lack of knowledge of how we think, when we think, and how we can guide our own reasoning or that of others. Psychologists have provided us with no accurate and adequate outline of the typical thought process that people use unconsciously in solving the ordinary problems of life; and educators have invented no technique for training ourselves and others to reason. Certainly all methods developed in this direction in the past have been of doubtful value, as, for ex-

ample, the "inductive-deductive" lesson plans that were not long ago the vogue and the "Herbartian five steps" which preceded them.

In the past, individuals met and solved great problems for themselves and humanity. They met problems which we cannot well meet but a study of which will simplify our complex civilization and show how we, too, can meet our problems. If the past is not merely the dead past it is an instrument of education and can give knowledge, appreciations, and skills which can come only from the study of history. Among these skills is the ability to think socially; the ability to do collective thinking in a class or group; and the ability to use the past in solving our own life problems, individual and group. This skill is not a mere vague "culture" but a way of responding to a problematic situation. As Powys says, "culture is what we have left after we have forgotten all we have learned as information." This habit and skill in social thinking lasts long after information has vanished from the mind, if it has once been thoroughly formed. The chief reason for the failure of the thinking ability of the nation to measure up to the complexity of the requirements of modern civilization is the bare fact that we have not known how to think and so have not trained our youth to think. We have taught the apprehension and comprehension of topics, not the solving of genuine problems. This fact holds good not alone for history but for all subjects.

Yet in the past twenty years, research has fortunately uncovered the steps in the typical act of thinking; and this discovery of how we think has led directly to the invention of a technique for training ourselves and others to think—a "real logic." Dewey, Rignano, and others got close to these two discoveries in psychology and pedagogy, but not enough to make possible the experimental elaboration of a technique of training. But Dewey's final statement of his entire philosophy in his recent volume entitled *The Quest for Certainty* magnifies such a technique as the most

needed for the modern world—the application to the social sciences of the experimental methods of research which have been developed, apart from logic and philosophy, by the natural scientists.

This new technique of thinking reveals the method of the natural sciences that will save the social sciences and social life from stagnation and barrenness; it is much the same method used by the child in finding a lost ball and the adult in finding the best house in which to live. It is the method of selective deliberation, in which ideas of how to solve a problem are tested in the mind for merits and demerits and then weighed and judged to eliminate the poorest. It is the use of suppositions, hypotheses, or tentative answers, for solving problems. In ordinary life individuals and groups are entirely unconscious of the way their minds work; and they therefore suffer impaired efficiency in solving the problems of life. A great corporation or federal board or legislature may simply mull over a problem and fail to solve it correctly. Now, by this discovery, we can guide thinking far more surely, as conscious art.

II. THE GENERAL TECHNIQUE DISPLAYED

The five stages, or steps of this typical thinking process are as follows:

1. *Problem*: Recognize and scrutinize the problem and narrow it down to its precise meaning. If the trouble is in the carburetor of the car see just what there needs fixing. If there is great overproduction of cotton and wheat in the nation and consequently low prices, determine as precisely as possible (e.g., the Federal Farm Board) just what this difficulty is in all its bearings, domestic and foreign.

2. *Ideas*: Get all the suggestions, hypotheses, or tentative ways of solving the problem before you, even with considerable research—depending upon the character of the problem and the precise nature of the difficulty—and use combinations of the hypotheses found, as “combination

hypotheses," whenever possible. Look at all of the houses that about meet your precise needs, for example, in finding a house to buy or rent, in order that you may chance upon the best one and not overlook it. You can get no better idea or answer in your conclusion than you have put into your list of hypotheses. Of some fifty good ways of solving the farmer's problem mentioned above, a combination of three to six may prove the best working suggestion. If the only hypotheses possible are "to be or not to be," or yes and no, of course no combination hypothesis is possible. The emphasis here is on getting all the suggestions possible under the circumstances.

3. *Testing*: Try out each idea in your mind, testing it for merits and demerits in solving the precise problem as stated, preferably using an outline on paper for serious problems and for many problems while learning. Here the mind performs a "mental experiment" of testing and imaginatively trying out each idea without acting on it or accepting it as the best of the lot. We simply find the full and clear meaning of each suggestion in the light of our problem. Usually we find many more merits and demerits for each tentative solution, idea, or hypothesis, than we had supposed at first were possible. Overlooking merits and demerits ("seeing both sides of the question") and failing to foresee just how a suggestion would work in solving the particular problem may easily lead to failure, by the selection of the wrong hypothesis. In short, the "pros and cons" of each way proposed must be discovered. The meaning of the supposition is made clear.

4. *Judging*: Next, hold an "elimination contest" for the several ideas found; and weigh and judge them by comparison and contrast, two by two—discarding the weaker of the first pair, and then that of the next pair, and so on by eliminative comparisons of pairs down to the last. "Where shall we go for entertainment tonight" is a problem usually having several mutually exclusive ideas (theaters, dances, lectures, visits, etc.), which, after being

tested as to quality or utility, with merits and demerits listed in the mind or outwardly on paper, are to be weighed and eliminated one by one, even though one be a combination of several as first found. The process here is much like that of finding, testing, and choosing a candidate for a position where there are two or more applicants. In outlining a problem-solution, students often find it quite difficult to state just how and why they eliminated certain hypotheses. But clear statements refine judgment; and judgment lies at the heart of reasoning. Judgment is a kind of beauty contest. Selecting by eliminative comparison of pairs is the best way I have found for making this step accurate.

5. *Conclusion:* Here in the fifth step, the final choice of judgment is accepted, to be acted upon as the conclusion of the single act of thinking, or deliberation. This chosen hypothesis becomes the working hypothesis or conclusion. The action may be no more than that of final peace and rest on a belief, that was needed to stop the worry or curiosity of doubt and suspense. It may be as permanent an activity as marrying one of several suitors and slaving for him for a half century. It may be a great invention or a unique plan of business operation or of discovery; or it may be merely your choice of meat at a cafeteria or the pair of shoes for which you have tried on many pairs to select. In history teaching, it may be the conclusion which Washington reached about attacking Stony Point in your own vicarious re-thinking of his problem; or it may be your judgment as to the wisdom of making the attack at that time.

III. THE THINKING TECHNIQUE APPLIED TO HISTORY TEACHING

If our youth are going to learn to think individually they must be guided through these natural steps on the kinds of problems which they are going to solve in life or on the

nearest approach to such problems; and if they are going to learn to do cooperative thinking, in groups or boards or committees, they must have long class training in the process by these five steps. We could make two steps of the first one, as Dewey did, and other changes; but these five as given here seem best after many years of research and experiment on the problem. Dewey described the simple series, or tandem type of solution, not that in which all suggestions are gathered together (abreast) in step 2.

The best experimentation which has so far been done in the application of this thinking technique to history teaching has been by Mr. Russell Colbert of the high school at Washington, Indiana; and we are glad to use here for illustration two of the history problems which he and his class worked out. He says that this method of thinking revealed to him for the first time how he actually thought on his life and school problems; helped him for the first time to recognize thinking when he did it; and aided his students in the same manner in classes, not only in history but in several of the social sciences.

It is in the hope that others may use the technique in solving their own serious life problems and in teaching others how to think in the social sciences and other subjects—and especially in history, the most informational and memory-grinding subject of all—that we here present the discovery and its clear application.

We are not here interested in how well the class outlined and solved the problems by the technique but in the nature and method of the technique itself. What does it do for all thinking; and what does it do for thinking in history, individually and by a class? Comments will be welcomed by both Mr. Colbert and myself. We are seeking other teachers who will apply the technique to other subjects. The first solution following has but two hypotheses, while the second illustrates a problem with several tentative answers.

A. HISTORY PROBLEM WITH BUT TWO HYPOTHESES

I. *Problem*: Were the American commissioners justified or excusable in signing the treaty of Ghent in 1814 when it did not renounce the right of search of American vessels and the impressment of American seamen on the part of the British?

II. *Hypotheses, or tentative answers*: (a) Yes. (b) No. (No other hypotheses were discovered.)

III. *Test of the hypotheses*:

A. Yes, they were justified, or excusable

1. Advantages, or merits:

- a) The finances of the U. S. government were in a critical condition in 1814
- b) Practically all of the American naval vessels were blockaded by the British in 1814
- c) The American Army had not been highly successful in the war
- d) The spirit of disunion was rising rapidly in New England
- e) The European wars were practically at an end; consequently the principles of search and impressment would not be a pressing problem
- f) No other merits found

2. Disadvantages, or demerits:

- a) The American principles were right and should have been asserted in the treaty
- b) That the American spirit was still capable of raising armies that could "do things" was shown by the great victory of New Orleans, January 8, 1815, two weeks after the signing of the treaty of Ghent
- c) No other demerits found

B. No, they were not justified, or excusable

1. Advantages, or merits:

- a) The American principles with respect to impressment and search were right; and the American commissioners should have insisted upon incorporating them in the treaty
- b) That the Americans were not as "far gone" as some of the historians have indicated is shown by the spirit and ability displayed at New Orleans
- c) No other merits found

2. Disadvantages, or demerits:

- a) The United States Government was having very great difficulty in financing the war
- b) The American Navy was in a state of blockade in 1814
- c) At the close of the year 1814 the American Army had had very ordinary success
- d) The people of New England had not approved the war in the beginning; in 1814 they were threatening disunion

- e) The end of the European wars meant that the British could throw more resources into the war against the United States; it also meant that the British would not insist upon the right of search and impressment, since sailors were not so much needed
- f) The American people were thoroughly tired of the war and ready for peace on almost any terms
- g) No other demerits found

C. No other hypotheses were discovered, as stated. Partial justification and excusability seem untenable even when tested. [This part of the technique helps one avoid overlooking good hypotheses.]

IV. *Judgment*: That in 1814 the American people were ready for peace on almost any terms weighs heavily; that government finances were in a deplorable shape, largely because of President Madison's veto of the second bank bill in 1811 adds to the war-burden excuse; that the American Navy, although enjoying a brilliant success at the beginning of the war, had by 1814 been blockaded by the superior British navy, adds to the justification. The accomplishments of the American Army had been highly disappointing during the course of the war; New England was giving half-hearted support to the Government's efforts to prosecute the war; her attitude was in fact becoming daily more menacing. These facts weigh the scales down still more for justification. The end of the European wars meant that Americans would have larger British armies and naval squadrons to contend with. The end of those wars meant also that the matters of search and impressment would fade into the background so far as any practical importance was concerned. The life of the nation was menaced by any failure in securing the treaty.

On the other hand, the Americans had gone to war in defense of their rights; and they were now going out of the war without an explicit guarantee that those rights would be respected in the future. That the American spirit was still capable of "carrying on," at least for a time, against superior British resources was shown at New Orleans. But the essentials of a guarantee were implicit in the treaty as signed; and history shows that they were wise in not forcing the issue.

V. *Conclusion*: After thus weighing all of the evidence, the "pros and cons" and each hypothesis, we have concluded that the American commissioners were justified and excusable in signing the treaty of Ghent in 1814 when it did not explicitly renounce the right of search of American vessels.

Our Comment on the First Solution. Mr. Colbert's class thus worked out the solution of the problem set. The example is one of a yes-no set of ideas that admits of no others. In this particular instance, the supposition

of partial justification was thrown out as impossible, that the commissioners were either justifiable and excusable or not. That subsequent events proved the commissioners were correct and wise need not of course diminish the rigor of the reasoning, although history problems have this general disadvantage where the problems are of this vicarious character and not questions of future action. The reader may ask why the statements "no more hypothesis discovered" and "no more merits or demerits found," were made. These are supports to weak places in human nature. They aid us to avoid jumping at conclusions over the steps of suggestion finding and suggestion testing, so that judgment may have correct data with which to do its weighing and eliminating. These are a part of the technique of training to think so far developed. Supposition is probably the best term to use for hypothesis or suggestion, while the term hypotheses may well be reserved for the conclusion.

In yes-no problems, where the hypotheses are mutually inclusive and exclusive, no others being available, and where the two alternates—like left and right roads to take, or "to be or not to be" (although some persons are spoken of as half dead)—we have a peculiar and desirable modification and extension of the technique. It will be noticed that the merits and demerits of a yes-supposition are the very reverse of the merits and demerits of a no-supposition. When a person or class first works through the merits and demerits of each without knowing this fact, there seem to be two different sets of merits and demerits; but care would soon make these exactly alike and the reverse of the other. Consequently, the merits and demerits of yes cover the merits and demerits of no; and if one gets all of them for yes he needs no others to make a conclusion. Judgment, as a step, is practically eliminated as a weigher of suppositions, since there is but one, and becomes merely a weigher of the relative preponderance of merits and

demerits of yes. The question is, then, whether the merits outweigh the demerits or vice versa.

However, as a matter of training, it is usually best at first to work out all the merits and demerits of both yes and no and then to make a new outline, condensing and stating all of the merits and demerits for yes. New ones will ever be found among those for no, since looking at the reverse supposition helps us to perceive new advantages and disadvantages. For better trained students and adults, the yes-no type may be set down in the condensed form at once, a list of the pros and cons of the proposition. Here the mind seems to be operating with but one supposition; but I believe that we shall find that the mind never so operates in reasoning and always has or gets at least two. If the only idea is, for example, I shall accept this invitation to the party, the possibility of *not* accepting it is actually there in the background and operating in the testing and judging of the complete act of thought.

The second example is more typical, perhaps, in that it has several suppositions. Later on it will be seen that frequently we have a multiplicity of ideas for the solutions of history problems and others and that the testing of each may become very laborious; but there is no short cut to a solution by reasoning in such cases. Resort to chance, dogma, emotional bias, general feel of the situation and opinion are ruled out. Here we transcend ordinary methods of thinking on social questions.

B. HISTORY PROBLEM WITH SEVERAL HYPOTHESES

I. *Problem:* Why was England able to defeat France in the Inter-colonial Wars?

II. *Hypotheses or tentative solutions:* (a) More Englishmen were in America at the time than Frenchmen. (b) The English settlers were an entirely different class of people from the French settlers, better fitted to win the wars. (c) The English colonial system was superior to the French system. (d) The balance of power favored England at the time. (e) English leadership was superior to the French. (No other hypotheses discovered, except combinations of the above, probably all.)

III. *Tests of the hypotheses:*

A. There were more Englishmen in America at the time than were Frenchmen

1. Advantages, or merits:

- a) The English-American population at the time was between one and two million; the French-American population was less than 100,000
- b) No other merits found

2. Disadvantages, or demerits:

- a) The French had more Indian allies than did the English, which fact helped, in a degree, to make up for the lack of French people, made the fighting strength far greater
- b) No other demerits found

B. The English settlers were an entirely different class of people from the French, with advantages for defeating the French

1. Advantages or merits:

- a) The English settlers were largely homemakers
- b) The French settlers were largely hunters, traders, and trappers
- c) No other merits found

2. Disadvantages, or demerits:

- a) So far as waging war was concerned, the French-Americans probably had the advantage of knowing the territory over which the fighting was to take place much better than did the English-Americans
- b) No other demerits found

C. The English colonial system was superior to the French system

1. Advantages, or merits:

- a) The English colonial government system taught and trained the people in the principles of self-government
- b) Under the English system, the people had far more freedom and opportunity for initiative
- c) No other merits found

2. Disadvantages, or demerits:

- a) At the particular time, both the English and the French were concerned with "winning the war," not with abstract governmental principles
- b) The French system was more favorable for calling out and maintaining armies than was the English
- c) No other demerits found

D. The balance of power favored England at the time

1. Advantages, or merits:

- a) During the last two of the Intercolonial Wars, Prussia was the ally of England; Prussia was ruled at the time by Frederick the Great, the greatest military leader of his day

- b) The states allied with England were, as it turned out, better powers than those allied with France
- c) No other merits found
- 2. Disadvantages, or demerits:
 - a) It almost bankrupted England to keep this condition in working order and made her really weak
 - b) France also had powerful allies on the continent of Europe
 - c) No other demerits found
- E. The English leadership was superior to the French
 - 1. Advantages, or merits:
 - a) During the last and most important of the Intercolonial Wars, the British Government came to be almost altogether in the hands of Pitt, the foreign secretary
 - b) Pitt was an able man and selected able subordinates
 - c) France was at the time under the rule of the corrupt Louis XV, whose subordinates were in general less effective
 - d) No other merits found
 - 2. Disadvantages, or demerits:
 - a) France had an exceptionally able general, however, in America, in the person of Marquis de Montcalm
 - b) Perhaps leaders were not as important in such frontier warfare as we sometimes assume
 - c) No other demerits found
- F. No other hypotheses discovered, except combinations, as stated. See below.

IV. *Judgment*: There can be no doubt that the superior English-American population played a very important part in the outcome of these struggles and gave a balance. The fact that the English settlers were homemakers also worked in their favor; but the French-Americans knew the territory over which they were fighting better than did the English, and the Indians gave more active assistance to the French than to the English. These were evidently weaker than the other factors combined.

For peace-time pursuits, the English colonial system was superior to that of the French; but during war time the French system was probably the better because it was more centralized. It is true that the balance of power at the time favored England, as it turned out; and this was important. The English leadership in the home government was decidedly superior to that of the French; this gave superior weight to the English force. Consequently, the support given to the American war was more vigorous on the part of the English.

V. *Conclusion*: The English were successful in the Intercolonial Wars mainly because of no one factor but to the following combination of causes: The number and character of their American colonists; the favorable balance of power; and leadership superior to that of the French.

Our Comment on the Second Problem. This solution by the outline-technique also has the advantage of illustrating two types of solutions; those in which but one suggestion can be selected, as in buying a house, and those in which several suggestions can be combined to make a new suggestion stronger than any other. Usually the one or more combinations of suppositions should be listed and tested, as are all others. In this case, Mr. Colbert's class found it better to make the decision as to the combination supposition in the act of judgment, where it was found that each of several suppositions contributed as factors and that the combination theory very clearly dominated the others separately in merit. For practice and training, it is probably best to make each possible combination and always to hunt for a combination before deciding that no more ideas can be found. If a combination appears ("occurs") in the step of judgment it can be set back in the outline and tested and then weighed by judgment with the others.

The combination hypothesis is a valuable discovery that owes itself to this technique, although of course keen thinkers have always found that combinations of ways often solved problems best and that we can very often secure several goods of life in one. The alternatives are not always mutually exclusive. Henry Clay was noted for finding means between extremes and "compromises" that really solved problems. Great business men and inventors use the method clumsily and unconsciously. But here it becomes a conscious technique and a mental habit in the reasoning of the youth in our schools, by explicit training. And teachers will never be able to train people to think until they are able to do so with conscious guidance.

IV. CONCLUSION

These two examples of the technique in history teaching must, for brevity, suffice for many samples; but most teachers can now use the outline for solving their own life prob-

lems and then for class guidance on certain history problems, and thus gradually acquire the method. The writer and Mr. Colbert will be pleased to hear from all who use the method; and any questions, criticisms, or suggested modifications will be welcome. Only a part of history would come under problem technique; and we have been interested here to see how well the subject least problematic in its usual form could be made to help in training our nation to think socially as Dewey and others commend.

A STUDY OF THE INTELLIGENCE OF RURAL AND URBAN CHILDREN

CLAIRETTE P. ARMSTRONG

The usual partisanship aroused by a question bearing on the nature-nurture controversy is evinced whenever a comparison of rural and urban intelligence is broached. Specialists in many fields, more or less contiguous, contribute, some in favor of rural, others in favor of urban intelligence. Emerson, emphasizing the influence of environment, upholds urban intelligence in these terms: "'In the country in long time, for want of good conversation, one's understanding and invention contract a moss on them, like a paling in an orchard.' Cities give us collision. 'Tis said London and New York take the nonsense out of a man. A great part of our education is sympathetic and social. We can ill spare the commanding social benefits of cities."¹ An essay on culture at this early epoch might well envisage the matter thus, but it would not necessarily adequately describe an era of automobiles, airplanes, and radios, all of which have contributed to fostering communication and to lessening both geographical and social distance—in short to scraping the moss off "understanding and invention."

But how different are invention and understanding in children in rural and urban communities? This is the problem under investigation—the difference, if any, in the intelligence of rural and urban children.

To define the terms of this study: By urban is meant a city of the greatest magnitude. As for rural, "The rural sociologists are still trying to discover and define the American 'rural community.' One thinks it is really the 'urban' community—a composite or union of a town with its 'tributary' host of isolated farm households or family groups."² The United States Bureau of the Cen-

¹ R. W. Emerson, *The Conduct of Life* (Boston: Ticknor and Fields, 1860), pages 287-288.

² D. Snedden, *Educational Sociology* (New York: The Century Company, 1924), p. 105.

sus^a classifies as rural those incorporated or unincorporated villages having fewer than 2500 inhabitants, and in the present study the word "rural" is so interpreted.

From the variety of rural populations, this study selects children in small rural villages of northernmost Westchester County. Rural-village children are studied as distinct from those inhabiting scattered farm lands, who would obviously be different from the standpoint of occupational class, educational opportunity, and probably in other respects. Occupationally, the country villager may resemble the urbanite, except that he may function on a smaller scale. So as to avoid any serious discrepancies of climate, temperature, and so forth, with their resulting influences, groups of rural-village children and urban children not too widely separated geographically are compared.

In order not to be involved in the discussion of the definition of intelligence—what is being tested and what should be tested by psychological tests—"what the tests test" may be accepted as a working hypothesis for immediate purposes. It is conceded that there are a variety of different capacities and abilities, not only verbal but psychomotor, involved in ordinary adequate adaptation to the average environment, and samplings of various capacities are compared. Such a comparison of abilities arouses scientific curiosity and interest, not only because a knowledge of types of population is necessary before specific needs and disabilities can be adjusted, but also because it is desirable to know whether the city or the country is the best place to bring up children. When it is considered that 60 per cent of our population is educated in schools of the open country and the small village,⁴ the importance of this kind of knowledge is evident.

In the United States, the psychologist generally finds

^a Letter from Bureau of the Census to writer, April 9, 1929.

⁴ R. L. Finney, *A Brief History of the American Public School* (New York: The Macmillan Company, 1927), p. 307.

the intellectual balance in favor of the urban child, though in a few localities the reverse has been noted. The conclusions of Pressey and Thomas⁵ are fairly typical: That country children in Indiana rate about a year and a half in mental age below city children; that the usual type of intelligence test does not give adequate measure of the ability of country children; that performance tests and material more relevant to their environment are needed; and that with verbal tests involving constant use of pencil, a total measure of ability in a community where the work is almost wholly manual can hardly be expected.

Pintner⁶ sums up his finding of a slight inferiority of the village school to the city school and the greater inferiority of the very rural school by attributing all to the native ability of his groups, composed mostly of native-born Americans.

Educational surveys conducted in various States, for example in Virginia,⁷ North Carolina,⁸ Kentucky,⁹ New York,¹⁰ and Mississippi,¹¹ quite unanimously rate the rural-school child anywhere from six months to a year and six months behind the urban child in intelligence. O'Shea¹² does mention that "There are, however, small communities that rank higher than the highest community among the cities, whether large or moderate sized."

These surveys generally use as their instrument of measure, applied to children on farms or villages or both indiscriminately, either verbal tests of intelligence or educational tests, any of which may be said to measure capacity

⁵ S. L. Pressey and J. B. Thomas, "A Study of Country Children in (1) a Good and (2) a Poor Farming District by means of a Group Scale of Intelligence." *The Journal of Applied Psychology*, 1919, 2, pp. 282-286.

⁶ R. Pintner, "A Mental Survey of the School Population of a Village." *School and Society*, 5, 125, pp. 597-600.

⁷ *Virginia Public Schools*, Part II (Yonkers: World Book Co., 1921).

⁸ *Public Education in North Carolina* (New York: General Education Board, 1921).

⁹ *Public Education in Kentucky* (New York: General Education Board, 1922).

¹⁰ M. E. Haggerty, *Rural School Survey of New York State*, Educational Achievement (Ithaca, New York: Rural Educational Office, Agricultural College, 1922).

¹¹ M. V. O'Shea, *A State Educational System at Work* (Hattiesburg, Miss.: Bernard B. Jones Fund, 1927), p. 334.

¹² *Ibid.*, p. 334.

to succeed in school subjects, or school success. These results show a superior intellectual level of urban children in a limited number of special abilities of a verbal or scholastic nature, with other important abilities unmeasured. It may be that such results are to be envisaged as a boomerang caused by the weakness of educational systems in certain rural districts.

A rural-village group of 115 white boys and girls, born and bred in the Township of Bedford, Northern Westchester County, New York, were examined¹³ with psychological tests. The children, for the most part in the Katonah public school, constituted almost all of grades four to eight in the consolidated school which dates from 1907. About that time the present unincorporated village of Katonah, which numbers about 1400 inhabitants,¹⁴ was carefully planned and rebuilt, after the New York City Water Supply Department had purchased the original village and scattered farms to construct reservoirs. The school was enlarged in 1911, and is a roomy, modern building. Some children were included in this group from the consolidated school in Bedford Hills, a smaller town adjacent, and a very few from the two-room school in Bedford Village. These villages might be described as service stations for the surrounding country.

The parents of these children were largely classifiable in the small-business class, or skilled-labor class. They were all American-born, and half of the families had been in this locality or not far distant for at least three generations; some had lived there longer. Of the 23 cases of only two generations American-born, the forbears were all among the so-called "better immigrant"¹⁵ groups, from northern Europe. The ancestors of some of this group came from Bedfordshire, England, about 1640, and set-

¹³ By the writer, October 1928.

¹⁴ Rand, McNally Atlas, 1928.

¹⁵ *Memoirs of the National Academy of Sciences*, Vol. 15 (Washington: Government Printing Office, 1921), p. 699.

tled as farmers in the Township of Bedford. Only a few farmers were numbered, however, among the parents of this group.

The urban group of 328 American-born white boys and girls were all of grades four to eight in P. S. 6, Madison Avenue and 85th Street, New York City, a few children in P. S. 166 and 157, also in good neighborhoods. These urban children were so heterogeneous from the point of view of nationality of parents that they were compared not only *en masse* as a total urban group of 328 children, but were subdivided into smaller groups, the 99 children of foreign parentage in one group, the 134 of American parentage in another group. The 95 children of mixed foreign and American parentage and the few whose parentage was unknown were treated separately only for statistical reasons. In the foreign-parentage group, 63 per cent of the parents were known to be of the "better immigrant" quota.

The schools of both rural and urban groups were practically equivalent in educational opportunity and equipment, and the environments were advantageous each in its own way. The children were nonmigratory groups, indigenous to city or country. They were 9 to 14 years of age.

In order to tap a variety of abilities, three scales of psychological tests were administered;¹⁶ the Otis Intermediate Group Test,¹⁷ Form A, for grades 4 to 8, as the test of verbal or abstract intelligence; and two series of performance tests—the Army Individual Performance Scale,¹⁸ consisting of 6 items, and the Army Beta¹⁹ Test also used as an individual test.²⁰ The scores were transmuted into mental ages according to the norms for the

¹⁶ And scored by the writer.

¹⁷ World Book Company, Yonkers-on-Hudson.

¹⁸ Yoakum and Yerkes, *Army Mental Tests* (New York: Henry Holt and Company, 1920), p. 126.

¹⁹ *Ibid.*, p. 80.

²⁰ As administered in the laboratory of Dr. F. L. Wells, Boston Psychopathic Hospital, Boston, Mass.

respective tests, and I. Q.'s were computed for each test as a feasible basis for comparison of groups.

Table I gives the number of children examined in the rural and urban groups with each test. During the period of testing, some children were lost track of for various reasons, so not all had all three tests.

TABLE I
DISTRIBUTION OF CHILDREN ON THE THREE TESTS

Groups	Performance Tests		Verbal Test
	Army Individual Performance Test	Army Beta Test	Otis Test
2 Parents American.....	134	134	124
2 Parents foreign.....	99	99	95
1 Parent foreign.....	95	71	66
Total urban.....	328	304	285
Rural (2 Parents American).....	115	115	115

The above table gives the number of children in each group examined by each test. The group "1 Parent Foreign" contains some children of unknown parentage, and was treated separately only for statistical reasons.

Table II shows the mean I. Q.'s with their difference and its reliability for the rural and urban groups on each test, treating boys and girls together since no reliable sex differences were found on the tests as a whole. The following formulae were used in these computations:

$$^{21}Av.=GA+C \text{ (Algebraic)}$$

$$^{22}C=\text{sum} \frac{FD \text{ (Algebraic)}}{N} \times \text{length of step}$$

$$^{23}\text{Sigma dist.}=\frac{\text{sum } FD^2-c^2}{N} \times \text{length of step}$$

²¹H. E. Garrett, *Statistics in Psychology and Education* (New York: Longmans, Green & Co., 1926), p. 51.

²²*Ibid.*

²³*Ibid.*, p. 33.

$$^{24}\text{Sigma Av.} = \frac{\text{Sigma dist.}}{\sqrt{N}}$$

$$^{25}\text{Sigma diff.} = \sqrt{\text{Sigma}^2 M_1 + \text{Sigma}^2 M_2}$$

$$^{26}\text{Index of reliability} = \frac{\text{Difference}}{\text{Sigma diff.}}$$

TABLE II
COMPARISON OF I. Q.'S OF RURAL AND URBAN GROUPS
ARMY PERFORMANCE TEST

Groups	Mean I. Q.'s	Sigma dist.	Sigma Av.	Differ- ence	Sigma diff.	D Sigma diff.
2 Parents American.....	102.5	14.7	1.3	1.2	1.56	.63
2 Parents foreign.....	100.6	14.3	1.4	3.1	1.97	1.57
1 Parent foreign.....	103.9	13.1	1.5	.2	2.02	.09
Total urban.....	102.2	14.2	.8	1.5	1.56	.94
Rural.....	103.7	14.6	1.4
Army Beta Test						
2 Parents American.....	108.7	12.3	1.1	.5	1.6	.31
2 Parents foreign.....	106.8	13.3	1.3	1.3	1.81	.72
1 Parent foreign.....	109.3	13.1	1.6	1.1	1.96	.57
Total urban.....	108.2	13.5	.8	..	1.43	.03
Rural.....	108.2	13.0	1.2
Otis Test						
2 Parents American.....	103.4	16.9	1.5	2.0	2.16	.91
2 Parents foreign.....	95.7	15.1	1.5	9.8	2.18	4.46
1 Parent foreign.....	105.5	21.5	2.6	.1	3.05	.03
Total urban.....	101.4	18.0	1.1	4.0	1.87	2.15
Rural.....	105.4	16.5	1.5

This table shows the mean I.Q.'s for the rural and urban groups, and compares them, giving the difference between the I.Q.'s of the groups and the reliability of the difference. The only reliable difference is between the rural and foreign-parentage urban groups on the Otis Test, where the index of reliability is 4.46.

²⁰M. E. Garrett, *Statistics in Psychology and Education* (New York: Longmans, Green & Co., 1926), p. 145.

²¹*Ibid.*, p. 146.

²²*Ibid.*, p. 133.

In reactions to verbal and abstract situations, the rural group shows a slight superiority over the total urban group, but the difference is not statistically reliable. With the type of concrete ability tested by the Army Individual Performance Scale, the difference is still less in favor of the rural group, and it is quite negligible with the objective situations of the Beta Test. In reactions to verbal and abstract situations, the slight superiority of the rural group over the American-parentage urban group, is statistically unreliable, and differences are negligible with the nonlanguage tests.

In verbal and abstract intelligence, the rural group is reliably superior to the foreign-parentage urban group, as shown by the index of reliability, 4.46. A computation of medians shows that that of the rural group, 103.75 per cent, is equaled or exceeded by 27 per cent of the foreign-parentage groups, whose median is 94.8 per cent. The middle 50 per cent of the rural group falls between 93 and 117 per cent, well above that of the foreign-parentage group, whose median is between 85 and 104 per cent. This superiority persists at each age level. The superiority of the rural group with the performance tests is small and unreliable, though also present at each age level, and greater with the Performance than with the Beta Scale.

TABLE III
COMPARISON OF FOREIGN AND AMERICAN-PARENTAGE URBAN GROUPS
DIFFERENCE BETWEEN I.Q.'S AND ITS RELIABILITY

Test	Difference	Sigma Difference	Difference
			Sigma Difference
Performance.....	1.92	1.94	.98
Beta.....	1.82	1.70	1.06
Otis.....	7.77	2.16	3.57

In reactions to verbal and abstract situations, the American-parentage urban group is reliably superior to the foreign-parentage urban group, as shown by the index of reliability, 3.57. This superiority is also found at each age level. The middle 50 per cent of the American-parentage urban group score between 91 and 116 per cent, well above the foreign-parentage middle 50 per cent of 85 and 104 per cent. With nonlanguage tests, the slight superiority of the American-parentage group is statistically unreliable.

The rural group at least two generations American-born does not differ reliably on two scales of nonlanguage tests from the urban group, heterogeneous as to number of generations American-born, or from the urban group two generations American-born, or from the urban group one generation American-born (foreign-parentage group). However, when the instrument of measurement is a test of verbal or abstract intelligence, one that measures capacity to react to school situations, the rural children are reliably superior to urban children of foreign-born parents, even though not more than 37 per cent are of the inferior-immigrant groups. Similarly, urban children at least two generations American-born are reliably superior in verbal or abstract intelligence to urban children of foreign parentage. The rural group is not reliably superior to the urban American-parentage group in verbal intelligence, or to the urban group as a whole, in verbal intelligence.

A comparison of the occupations of fathers of children in the different groups by the Barr-scale rating of occupations, described as a "hierarchy of the occupations with respect to the relative demands which they make upon intelligence,"²⁷ gives average ratings so nearly similar as to verify the equivalence of the rural and urban groups from the occupational or economic point of view. Table IV

²⁷*Genetic Studies of Genius* (Stanford University, Cal.: Stanford University Press, 1925), L. M. Terman, in Volume I, page. 66.

gives these averages for the children for whom the parent's occupation was known.

TABLE IV
OCCUPATIONAL RATINGS ON BARR SCALE

	Rural	Urban		
		2 Parents American	2 Parents Foreign	Total Urban
Average obtained	10.63	10.81	10.325	10.466
Sigma distribution	2.56	3.07	2.56	3.045
Number of children.....	114	114	91	287

*Including some of mixed parentage.

This rating of 10-plus compares closely with the Barr-scale rating for a small-town station agent or mechanical repairman in shop or factory, or traveling salesman. It is above Terman's mean rating 7.92 for the general population, which corresponds to the rating for a plasterer, baker, or metal finisher. This is explicable probably by the fact that there chanced to be no children of unskilled laborers in these groups. This average is below Terman's rating of 12.7 for the 346 fathers of gifted children which corresponds to the Barr rating for a stenographer, librarian in a small city, or primary teacher.

Table V shows the median I. Q.'s for the children on the Otis and the Individual Performance Scales in the rural, foreign-parentage urban, and American-parentage urban groups, for each occupational class according to the Taussig²⁸ five-grade classification, but omitting the fifth grade (unskilled labor) which was unrepresented. Table VI gives the distribution of children, for whom paternal occupations were known, in the four occupational classes.

²⁸Taussig, *Principles of Economics*, Vol. II (New York: The Macmillan Company, 1921), pages 134-148.

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TABLE V
MEDIAN I.Q.'S IN THE OCCUPATIONAL CLASSES
(According to the Taussig Classification)

	Otis Test			Performance Test		
	Rural	Urban		Rural	Urban	
		American Parents	Foreign Parents		American Parents	Foreign Parents
Professional.....	125	114	105	120	118	103
Business.....	105	108	102	101	102	105
Skilled labor.....	101	96	94	104	100	102
Semiskilled labor..	100	100	93	90	96	91

TABLE VI
NUMBER OF CASES

	Rural	Urban	
		American	Foreign
Professional.....	12	11	3
Business.....	33	36	26
Skilled labor.....	59	49	53
Semiskilled labor.....	10	18	9

On the verbal test, the group differentiation is fairly consistent in each of the four occupational classes, with the rural group highest in intelligence, the American-parentage urban group but slightly different, and both groups above the foreign-parentage urban group. With concrete situations, the group differences are not consistent. In some of the occupational classes, the foreign-parentage group is superior to the others. Again the evidence is that differences between these groups are in verbal, not in concrete, objective situations.

Gradations of difference in central tendency between the occupational classes within each group are for the most part in accordance with other research, with verbal situations. That is, the professional group always leads, with the business class second, and the skilled labor and semi-skilled labor classes always lower. With concrete situations, occupational class differences are less consistent and less marked. The indications are that there is less differentiation, especially in the foreign-parentage group, between children of different occupational classes in psychomotor ability. However, the semiskilled labor class is always lowest.

Differences in intelligence of rural and urban groups of children may be due to several factors of variability. As pointed out before, one factor of variability may be different interpretations of the meaning of intelligence. The test used to measure intelligence may show a superiority in its special field, which might not be true of other fields of ability.

Another factor of variability is occupational status. A high correlation has been found between parental occupation and intelligence of children. This has been brought out by such studies as those of J. E. Collins,²⁹ S. L. Pressey and R. Ralston,³⁰ M. Haggerty and H. B. Nash,³¹ and numerous others, all of which report a concentration of professional fathers at the higher ranges of intelligence and of children of unskilled laborers at the lower levels, with a sharp differentiation between occupational groups, when classified in accordance with the Taussig five-grade classification.

Nationality or race affords another factor of variability in group intelligence. This was brought out during the

²⁹"The Intelligence of School Children and Paternal Occupation," *Journal of Educational Research*, 1928, XVII, pp. 157-169.

³⁰"The Relation of Occupation to Intelligence as it appears in the School Children of a Community," *The Journal of Applied Psychology*, 1919, pp. 368-374.

³¹"Mental Capacity of Children and Paternal Occupation," *The Journal of Educational Psychology*, 15, 1924, pp. 559-572.

World War by a vast amount of psychological testing of immigrants, on the basis of which English-speaking, Scandinavian, and Teutonic recruits were rated highest in intelligence, and Slavic and Latin lowest,³² with superiority of the groups longest resident in the United States.³³ Many students have since corroborated this. However, nations cannot be rated by these findings for, as Porteus and Babcock³⁴ point out, it is not known how far our immigrant groups are drawn from the average of their race as regards occupational or social position. Another unknown quantity is the frequency of appearance of certain grades and types of ability in each race, although variability is greater with some than with others. Conclusions are, therefore, limited merely to positing that certain southern European races, as they are represented in this country, are inferior in capacities which underlie school proficiency.

Further research corroborates the need for caution in conclusions concerning intelligence levels of certain nationalities. Inferiority while present in one ability may not be present in another. A language difficulty or verbal disability is not tantamount to a manual disability or to inferiority with concrete situations. In comparing rural and urban children, the groups should be equated as to occupational status, nationality, school opportunity, and various types of ability should be tested.

The data from this study lead to the conclusions that rural-village and urban children do not differ in intelligence, either verbal or concrete, if of American parentage, of equivalent occupational class, and of equal school opportunity. Their "understanding and invention" are equally good and the rural village is probably as beneficent a milieu as the urban in which to bring up children.

Children of immigrants are inferior to children of American parentage, whether rural or urban, in a language or

³²Memoirs of the National Academy of Sciences, V. 15 (Washington: Government Printing Office, 1921), p. 699.

³³*Ibid.*, p. 704.

³⁴*Temperament and Race* (Boston: R. G. Badger, 1926), p. 210.

verbal ability undoubtedly necessary for success in many situations inextricably bound up in our civilization. Whether the verbal inferiority is a language difficulty or a verbal defect indigenous to the child or to the environment, it is none the less present and characteristic of many children of foreign parentage in the New York City public school (as well as elsewhere) and is responsible for much scholastic misfit and maladjustment to the school situation, all of which leads to truancy with its attendant evils. Opportunity for training and success in school along concrete or nonverbal lines for this type of child is emphatically necessary.

Evidently the instrument of measurement may be a cause of group differences; that is, groups may differ in one type of ability tested, but not necessarily in another type. Verbal tests are a limited instrument of measurement if nationality or number of generations American-born enter in as a variable, as well as being limited to a lesser extent when there is great disparity of occupational class.

According as groups have a larger representation of children in the highest occupational classes, in so far are they superior in all types of ability to groups lacking in this respect, irrespective of the question of rural or urban environment. It might be expected that occupational classes would have different levels of verbal ability since measurements are usually made by verbal scales of occupational classes arranged in a hierarchy progressing from strictly manual vocations to the strictly verbal. However, tests of concrete abilities corroborate this differentiation to some extent, in that the highest occupational classes are superior in such abilities to the lowest. Superior abilities seem to be concomitant. In the middle grades, occupational class distinctions are less significant compared with psychomotor ability.

If occupation and nationality are not equated, differences found between rural and urban groups may be due to either or both of these factors.

Certain occupations demand certain levels of intelligence, and, conversely, certain levels of intelligence may embark upon a certain range of occupations. This may be more or less controlled by opportunity and environment, though it is always conceded that environment can be effective only within the limits imposed by heredity. To define these limits absolutely is difficult with the normal human being.

The dictum of the sociologist is subscribed to: That characteristic socio-psychological traits have their etiology in selection, isolation, and occupation, with any sampling of populations.

RESEARCH PROJECTS AND METHODS IN EDUCATIONAL SOCIOLOGY

In order that this section of THE JOURNAL may be of the greatest possible service, its readers are urged to send at once to the editor of this department titles—and where possible descriptions—of current research projects now in process in educational sociology and also those projects in kindred fields of interest to educational sociology. Correspondence upon proposed projects and methods will be welcomed.

THE NEXT STEP IN CRIME PREVENTION

The most recent report of the New York State Crime Commission Sub-Committee on Causes under the research direction of Harry Shulman¹ points the way for the first time to a basic and ultimate program of crime prevention. It indicates that the problem is primarily one of community organization focusing upon the child. In brief, the proposal of the Crime Commission based on an extended series of researches is that the known breeding places of crime in our great cities be used as the points of attack. Criminal careers begin in adolescence. The breeding places of criminals are well known. It is suggested that in these communities neighborhood councils be organized where none exist and that a committee of each of these neighborhood councils be formed for the specific purpose of crime prevention to integrate and coördinate the work of the various preventive and character-forming agencies. No adequate, responsible local agency now exists whose sole purpose it is to prevent crime. Such a committee would have an office which would act as a clearing house for all problem cases and a capable staff for carrying out its work. In this way a program to meet the needs of every child who may become a delinquent is to be developed.

¹ The report is entitled "Crime and the Community." It is an important document which should be in the hands of every person interested in children and in criminology. Copies of the report may be obtained by writing to the New York State Crime Commission, 244 William Street, New York City.

The time is now ripe to take a further step, which is not specifically suggested by the Crime Commission; namely, to organize demonstrations of crime prevention throughout the country paralleling the various health demonstrations which have been promoted to show the community how to control disease. Such demonstrations would need to be called "Citizenship Demonstrations" or some similar name in order not to emphasize the negative aspect of their work, and they would also include continuing researches as to the causes of crime with an emphasis upon experimental methods and with safeguards against falling into meaningless routine in dealing with cases.

Such a five- to ten-year demonstration has been suggested for a local area in New York City in which a great deal of basic data has already been collected on the problems of child behavior.² The neighborhood council of the district and the Crime Prevention Bureau of the Police Department are interested in developing such a project and it is hoped that money for the demonstration will be made available.

A STUDY OF A RESIDENTIAL SUBURBAN COMMUNITY³

This is a study in human ecology and community reorganization.

Statistical indices, such as per capita newspaper circulation of metropolitan papers, sex ratios, and age distribution, were calculated and employed in an attempt to demonstrate how the suburban area and the types of suburbs might be delimited. Data on transportation and commutation also show that the suburban community has quite a different relationship to its metropolis than an independent, relatively isolated town. The relationship of the satellite city or industrial suburb to the metropolis is more

² This is the Boys' Club Study area.

³ The following statement with regard to the study of Winnetka, Illinois, has been furnished through the courtesy of Clarence E. Glick who conducted the study. Mr. Glick is now teaching sociology in the University of Hawaii.

impersonal than that of the residential suburb, but this type is nevertheless just as dependent upon the city for its rise and existence. Heavy, standardized industries move to the industrial suburbs on the periphery, but their control or dominance remains at the financial center of the metropolis.

In approaching the study of the natural history of the residential suburb, Winnetka, Illinois, was selected for special scrutiny. Some suburbs are started in open country and lack definite community solidarity and organization in the beginning; they usually attract a heterogeneous population. Historical documents and interviews with old residents reveal that the suburb studied was formerly a well-integrated village community, almost as isolated from the metropolitan life of Chicago as an Iowa town. This, however, did not persist long. Its location on the shores of Lake Michigan and on a main line of the Chicago and North-Western Railway (as known today), seventeen miles from the "loop" of Chicago, destined it for other than a village existence. Historical materials are also employed to describe the migration of "city people" to the village, while quotations from personal interviews and written reminiscences of old residents suggest the motives for migration from the metropolis, the rise of the "commuter class," and the early character of the new "suburb." The facts seem to indicate that if the suburb develops in a well-organized village community along one of the chief lines of transportation to the city, the community will exhibit little disorganization, the movement tending to be a peaceful infiltration by a rather homogeneous group.

The change from a village community to a residential suburb is more than one in name. A real community reorganization is involved. In the first place, changes in ecological organization may be noted. When land values were plotted on a map, business and residential centers were located. Field investigation demonstrated that the residential centers represented the dwelling places of the

people who are regarded as of highest social status within the local community, and who also are prominent in the metropolis. The memberships of groups, such as that of a popularly recognized "exclusive" country club, and those Winnetkans whose names appear in the Social Register of Chicago, were plotted upon maps; these likewise exhibited the existence of the same residential centers within the suburb and indicated that they were more or less segregated districts. This forms a contrast to the intimate, pervasive life of the village community with its almost total lack of residential segregation.

The occupational distribution within the suburb was secured by tabulating and classifying data found in R. L. Polk's 1928 Directory for Winnetka. This graphically presented the fact that the economic base is no longer the local community, but the entire metropolitan area. Winnetka, for instance, with a population of about 10,000 had more than 165 lawyers! The fact that there was, on the one hand, an exceptionally large proportion of the total number employed in the professions and in important metropolitan executive and business positions, and, on the other hand, a large group in domestic and personal service, suggested a further change from old village organization; namely, the rise of rather well-defined social classes. Life histories and intimate family documents were gathered, and these when classified indicated the existence of social classes designated as follows: (1) the *élite*, (2) the *bourgeoisie* (the social climbers and middle-class residents), (3) the tradespeople (local merchants, those in trades, service industries, etc.), (4) the servants, and (5) the laboring or unskilled population.

Simultaneous with the changes occurring in the ecological and social relations developed modifications in the common institutions within the community. Interviews with officials, the study of documents relating to the municipal government, attendance and observations at "town meetings," and an analysis of voting at elections were sources

and methods employed to discover changes in the political institutions. The nationally known Community House of Winnetka, and the Winnetka Congregational Church, commonly spoken of as the "community church," are natural and easily understood religious institutions in this type of suburb, but are quite foreign, per se, to a village community.

Finally, the study of Winnetka suggested a hypothesis which will require further verification; namely, that each suburb subserves one of a few productive functions (industrial suburbs) or consumptive functions (residential suburbs), and to this extent represents one or a few selected groups within the metropolitan area as the unit. Winnetka has two dominant groups from this point of view with interests which have an important relationship to the life and problems of the metropolis: those interested in "society" with their concern for activities on the "Gold Coast"; and those so-called "socially minded" persons with their participation, financially and personally, in the social work and general social welfare of the city.

TREND OF RESEARCH AT CHICAGO

The trend of sociological research at the University of Chicago is indicated by the following partial list of completed but unpublished studies made in connection with the research being carried on by the Local Community Research Committee of that institution.⁴

Abbott, Edith. Housing and Population in Chicago.

Bigham, T. C. Chicago Federation of Labor.

Carmichael, Lillian. Street Trades in Relation to Juvenile Delinquency in Chicago.

Channing, Alice. The Illinois Soldiers' Orphans' Home.

Clarke, Helen I. Uniform Areas for City-Wide Agencies.

Conway, Paul. The Apartment House Dweller: A Study of Social Changes in Hyde Park.

⁴ The complete list of these studies is to be found as an appendix in T. V. Smith and Leonard D. White, *Chicago: An Experiment in Social Science Research*, published by the University of Chicago Press. This volume gives an excellent picture of the complete set-up of the extensive research project in social science under way in Chicago.

- Cressey, Paul G. The Closed Dance Hall in Chicago.
- Davis, Elizabeth. State Institutional Care of Feeble-Minded in Illinois.
- Duffot, J. L. A Social Psychological Study of the Failing Student in High School and College.
- Dunn, Margaret. Jane Addams as a Political Leader.
- Evans, Louis E. Pontiac Reformatory.
- Freund, R. Begging in Chicago.
- Glick, Clarence Elmer. Winnetka: A Study of a Residential Suburban Community.
- Graham, Irene. Negroes in Chicago, 1920; An Analysis of United States Census Data.
- Hayner, N. S. The Hotel: The Sociology of Hotel Life.
- Hirsh, Elizabeth. The Study of the Chicago and Cook County School for Boys.
- Hosford, B. Study of Protestant Orphanages in the Chicago Region.
- Ireland, W. R. P. The Study of the Process of Americanization among Polish Young People in a Settlement Neighborhood.
- Lieffer, M. H. The Boys' Court of Chicago.
- McGill, H. E. Land Values, an Ecological Factor in the Community of South Chicago.
- Myers, Earl D. Juvenile Delinquency.
- Reckless, W. C. The Natural History of Vice Areas in Chicago.
- Scott, Chester. The Study of Juvenile Delinquency and Recreation in a Settlement Neighborhood.
- Shaw, Clifford. Juvenile Delinquency.
- Stephan, F. F. Public Recreation in Chicago.
- Stephan, F. F. Some Social Aspects of the Telephone.
- Tibbitts, R. C. Immigrant Groups in Chicago.
- Tibbitts, R. C. Social Forces and Trends in Settlement Neighborhoods.
- Townsend, A. J. The Germans in Chicago.

WASHINGTON CHILD RESEARCH CENTER

The Washington Child Research Center has moved to new quarters to provide additional space for a second group of children in the laboratory division. The old group of twenty-four children between the ages of two and three and a half years will be continued. The new group will include twenty children from three and a half to five years of age who will have a seven-hour daily program. The physical arrangements of the center will not only provide for the needs of the children, but will give additional opportunity for research so that "all the observation taken of the younger children can be continued with the older children and developmental patterns studied." The staff of the study will remain the same. The new location has the advantage of an attractive playground. The education of parents will continue as an important part of the program.⁴

⁴ A statement in regard to the work of the Center is contained in *School Life*, November, 1930.

BOOK REVIEWS

The Aims of Education and Other Essays, by A. N. WHITEHEAD. New York: The Macmillan Company, 1929, 247 pages.

A distinguished English mathematician and philosopher, now professor of philosophy at Harvard, here turns his searching attention to the problems of education. This book of ten republished essays is one which professional students of education will want to consider, as the following germinal views of the author will indicate.

"One main idea runs through the various chapters, and is illustrated in them from many points of view. It can be stated briefly thus: The students are alive, and the purpose of education is to stimulate and guide their self-development."

We need an understanding of the "insistent present." The essence of education is religious in the sense of inculcating the duty of controlling events and reverence for the fullness of the present. There is a rhythm in education, involving the familiar principle of fitting subjects and methods of study to the proper stage of mental development. The two essentials of education are freedom and discipline. The teacher has the double function of eliciting enthusiasm and creating the environment "of a larger knowledge and a firmer purpose." The ideal of a technical education is found in the words of George Bernard Shaw: "It is a commonwealth in which work is play and play is life," involving geometry and poetry as well as turning lathes. The continuing place of the classics in education is dependent on the judicious use of translations in giving an initial sense of the unity and meaning of the selection. Mathematics, if it is to be used in general education, must get rid of its "reconditeness" and submit to selection and adaptation in accord with the current needs for understanding number, quantity, and space, and for handling abstract ideas. The function of the university is to unite young and old in the imaginative consideration of learning. The subject of logic has an indispensable function in that organization of thought known as science. Physical science omits judgments of worth and reality, and confines itself to such ideas as "fact," "object," "time," and "space," and "fields of force." Space and time may be regarded not as absolutes but, in the one case, as relations between objects and, in the other case, as relations between events. This is their "relativity."

There is nothing soft, superficial, or ephemeral about this pedagogy. It judiciously combines the concepts of culture, training, and discipline with those of practicability, development, and freedom.

HERMAN H. HORNE

Types of Philosophy, by WILLIAM ERNEST HOCKING.
New York: Charles Scribner's Sons, 1929, xi+462
pages.

Occasionally a book in philosophy is both comprehensive and easily comprehensible. Here is one, written by the Alford professor of philosophy at Harvard, who has to his credit half a dozen other important philosophical works. This is just the kind of book to use with beginning classes in philosophy, as distinguished from psychology, logic, and ethics. It combines in a very happy manner the theoretical with the historical approach to the main philosophical problems. In fact it is practically a large and readable syllabus, indicating informal and personal contacts with students, and containing useful bibliographies.

The author himself is an independent objective idealist of the school of Hegel and Royce. And though he defends his own position stoutly, there is no unfairness or prejudice in stating the positions of the other schools. The plan of treatment is first to give an impartial exposition of the type of philosophy in question and then to examine it thoroughly.

Practically every leading type of contemporary philosophy is included, except that of critical realism. And among the types included are successively: naturalism, scepticism, pragmatism, intuitionism, dualism, idealism in its subjective and objective forms, realism, including neo-realism, mysticism, and eclecticism. The author allows more validity to mysticism than did Professor Royce. The volume concludes with a *confessio fidei*. Among the personal views of the author are the ambiguity of simplicity, the need of beginning with empiricism, the recognition of rationality as inclusive, tentative mysticism, and the union of value and fact. The book is practically ideal for orientation purposes.

HERMAN H. HORNE

Character Through Creative Experience, by W. C. BOWER.
Chicago: The University of Chicago Press, 1930,
270 pages.

Here is a book that bears strong testimony to the way sociology and its findings concerning human nature and social life are influencing contemporary thinking. It is deserving of attention from all sociologists. Reading it carefully will set many sociological findings in a new light.

Many sociologists will be surprised to find an expert in education who makes basic use of sociological insights in developing a new and constructive theory of education. To be sure such a development has long been due. But to find it really developed and set forth in such a significant volume as this, from the ever creative pen of Professor Bower, is heartening to every student and teacher of sociology. Some of the relations of education and sociology along the fringes have been emphasized by the small group of educational sociologists. But, this

book establishes more fundamental relations. It takes some of the basic positions of sociology and weaves them into a new and creative theory of education.

Personality—in the full scientific meaning that Thomas in his *Polish Peasant in Europe and America*, and other works has assigned to it—becomes the center of attention of educational processes in this theory of Bower. "The primary objective of character education," says Professor Bower, "is the development of a social, ethical, and spiritual type of personality" (page 34). "Personality as here conceived is a more or less stable organization of physical elements, impulses, habits, ideas, ideals, and purposes undergoing continuous change in a dynamic process" (page 259).

"Experience, moreover, is the outgrowth of the adjustment process by which persons, equipped with natural tendencies, respond to the various aspects of their physical and social world" (page 45). Following this clue, Professor Bower concludes that personality "is the result of the process by which persons adjust themselves to their material and social world" (page 259). The relative influence assigned to these social aspects of experience becomes a factor of vital importance to sociologists, as it reveals how fundamentally the insistence of the importance of the social aspects of human nature is seeping into the educational thought of our day. It has been just a little over one hundred years since Comte developed and announced to the scientific world his concept of the *milieu sociale*. It has since so completely been absorbed into the current thinking of the day that Professor Bower uses it without apparently any sense of indebtedness to Comte. But he also gives it a significance that the scientific findings of Comte's day did not make possible. For Professor Bower and his new educational theory the *milieu sociale* assumes a basic and fundamental rôle in the shaping of human personality. "It appears that the impulses to action are the results of man's original nature but the patterns which responses assume are chiefly taken over from the social milieu" (page 44). Thus the social milieu becomes a powerful formative factor in shaping personality. It shapes the behavior patterns. The behavior patterns are developed and shaped in the interactions of the changing cultures of man. Thus the new emphases of the culture aspects of sociology are linked up intimately with the new and emerging insights of educational theory.

Moving forward on these basic positions so closely related to the contributions of sociology to modern thought, Professor Bower advances his new theory of education as "nothing less than the initiation of the young into a creative personal and social experience" (page 13). All the way through the book much emphasis is placed upon these aspects of social experience. The old "individual" of earlier educational theory has totally disappeared and a new socially filiated personality has become the center of educational theory and practice. "Education is a practical process of social control by which society seeks to con-

serve its values and achievements and to recreate them in its young" (page 21). Thus we have an educational theory that takes into account the sociological concept of change. Education is freed from the necessity of inculcating by instruction and training the dead weight of the past. It is left free to choose values from past experience of the race and to initiate youth into these values, in their relations with the present and the future.

MARTIN HAYES BICKHAM

An Introduction to Social Anthropology, by CLARK WISSLER. New York: Henry Holt and Company, 1929, 392 pages.

There are few fields in the study of society more in need of a "gateway" text of general orientation and social application than that of anthropology. Essential as this field is to the understanding of the fundamentals of social organization and of social institutions, it is so buried in masses of descriptive and largely uncorrelated data as to be very nearly a closed book to any but the specialist. On the other hand the generalizations and conclusions of social anthropologists must be used and presented even in introductory courses in general sociology. The average teacher knows himself to be a tyro in this field of information and the student is definitely handicapped without an adequate understanding of the descriptive backgrounds.

It is the appreciation of this situation which has moved the author to meet a definite need through the agency of the present text. It has been his aim, he tells us, to present the essential background materials suitable for an introductory course, keeping in mind always the social implications of the study. The aim is worthy and the effort is fruitful but the text still reads, in large part, pretty much like another Smithsonian report. Too much of the romance inherent in the subject is lacking. In his chapters on "Marriage," "The Geographical Method," "The Culture Area Concept," and "Culture Processes," the author comes the nearest to making contributions of fundamental sociological importance.

C. G. DITTMER

Tepoztlan: A Mexican Village, by ROBERT REDFIELD. Chicago: The University of Chicago Press, 1930, 315 pages.

This is a study of a Mexican village, itself a hybrid product of Indian and Spanish culture, now undergoing new changes as a result of diffusion from the city. Mr. Redfield, in an imposing discussion of methodology, sets himself a number of laboriously defined tasks to be completed in this study of the contemporary life of a community transitional between the "folk" and the "urban." There is a decided break between the theoretical preparation of introduction and definition

of terms and the actual achievement of the book, which is an extremely superficial, external description of certain aspects of life in Tepoztlan.

This consists of a discussion of the material culture, a formal, undynamic treatment of the socio-political organization, and a few special studies: of the folk literature, the calendar, the heroes of the people, contact with the city. The careful reader will find many hints which give rise to speculation, but few answers to his speculations. To those, however, who have small knowledge of contemporary Mexico, who have never realized the strength of the Spanish-Indian cultural blend which obtains there, the book offers some good descriptive material which could also be used to advantage in courses in history and geography.

MARGARET MEAD

The Health of the Mind, by J. R. REES. Cambridge, England: Washburn and Thomas, 1929, 266 pages.

This practical book is a digest of some of the recent work in the field of mental hygiene and psychiatry. The author makes no pretensions about its being either all inclusive or exhaustive. It is, in fact, the kind of a book that will make an appeal to social workers, school psychologists, and laymen for whom more technical works may have little appeal. The contents of the book include chapters on Mental Health, Bodily Mechanisms, Instincts and Personality, Mind and Body, Psychological Mechanisms, Mental Breakdown, Problems of Early Life, Problems of Childhood and Adolescence, Adult Problems, Sex Education, and the Art of Adjustment.

The author avoids identifying himself with any particular school of thought in this field. He is rather eclectic in his points of view in the sense that he is willing to accept the best that has been developed in each of the several schools. The volume is full of practical suggestions that every teacher and social worker should know. The discussion on psychological mechanisms is perhaps unduly influenced by psychoanalysis; while the title of chapter IV, Mind and Body, would in itself provoke a tempest in most American psychological laboratories.

CHARLES E. SKINNER

Newer Ways with Children, by M. V. O'SHEA. New York: Greenberg, 1929, 419 pages.

Of late, complaints have come from parents that they are much confused over the controversies of experts over the training of children.

Dr. M. V. O'Shea has written a book which will very much aid the parents in handling the everyday problems of their children. Selfishness, jealousy, destructiveness, temper tantrums, and other traits are all helpfully discussed in *Newer Ways with Children*. Practical suggestions for training children in courage, confidence, and ethical behavior are found in some of the very readable chapters of this book.

Although this book is especially helpful to parents, teachers will find much to aid them better to understand all types of children coming under their care.

META L. ANDERSON

Fundamentals of Child Study, by EDWIN A. KIRKPATRICK.
New York: The Macmillan Company, 1929, 410 pages.

The important work on *Fundamentals of Child Study* which has been so valuable for almost twenty-five years has been brought up-to-date by Dr. Kirkpatrick. The new book needs no introduction. It has proved itself worth while over a long period of time. The new edition retains what is good of the old, and adds chapters on the newer aspects of child study such as personality development and mental hygiene.

This book has been and will continue to be a valuable textbook for the use of students in education and psychology.

META L. ANDERSON

Elementary Laboratory Aerodynamics, by ARTHUR JORDAN. New York: Ronald Press Company, 1930, 128 pages.

This is a manual for teachers of aviation which outlines twenty-one experiments that might be of use to demonstrate some of the principles of aerodynamics. It is distinctly not an outline of a course in aerodynamics and at best can serve only as a supplement to the material which the average teacher has prepared for his course. As a supplement, however, it is likely to prove of real worth. Experiments are intended for juniors and seniors in high school and presuppose a knowledge of elementary algebra and plane geometry. Nearly half of the book is left blank so that notes and experiment results may be recorded in the volume itself.

ROLAND SPAULDING

Curriculum Problems in Industrial Education, by FRED C. SMITH. Cambridge: Harvard University Press, 1930, 145 pages.

This study represents an attempt to obtain curriculum material which can be utilized for the upgrading of employed adults in certain types of industrial pursuits. The curriculum material obtained emphasizes activities other than school activities which are necessary for increased efficiency on the job.

The author contends that the technique which he has employed represents a contribution and that the type of material derived is superior

to material obtained in any former curriculum studies with which he is familiar.

The technique employed centers around conferences which were attended by representatives of the three groups most concerned; namely, employers, workers, and educators. Key expressions typical of activities needed for improving the average workers were suggested at these conferences, and later committee action resulted in a refinement of the expressions into a working list of desirable activities. A questionnaire check on material was furnished through the assistance of supposedly competent workers in the field. An experimental school was established in Cincinnati to try out the material.

The original investigation dealt with employed machinists. Subsequent studies employing the same techniques have dealt with the building mechanics, electricians, and industrial chemists.

The techniques employed by Smith are interesting, but they have been used in modified form by others. The material derived is subject to the criticism of being entirely too general and of questionable validity. There is apparently a lack of distinction made between material which is absolutely essential to the correct and understanding performance of the various daily jobs and that material which, although it may be interesting or desirable from a general point of view, nevertheless is not absolutely essential. Herein lies one of the weaknesses of large group suggestions. The mere fact that one member of the group makes a suggestion which usually reflects his personal viewpoint is no criterion of the worth of the suggestion for application to all of the adult workers. Furthermore, all members of the group may not have the same interpretation of any one or more statements made by members of the group.

The time allotments for covering the various topics given in the suggested courses seem in every case to be entirely inadequate. The topics given in the courses seem, in many cases, to constitute merely a condensed list from a standard text in the field. Insufficient attention has been given to the matter of correct method to be used with the content derived.

The study is interesting and suggestive, but at its best it can hardly be rated as being better than a stimulating start towards the solution of one of our major problems in the training of industrial workers.

RALPH E. PICKETT

NEWS FROM THE FIELD

The Child is Coming Into His Own

A second session of the White House Conference on Child Health and Protection called by President Hoover was attended by more than three thousand delegates and experts from all over the United States. No previous meeting in American history brought together so large a group of individuals interested in the welfare of the child. This meeting surely marks the beginning of a new epoch in the study of the child and his needs. It marks the beginning of a new charter of health, happiness, training, freedom, and citizenship of the American child.

The final conclusions of the conference were summarized as follows in the report adopted:

"Every American child has the right to the following services in its development and protection:

"Every prospective mother should have suitable information, medical supervision during the prenatal period and competent care at confinement. Every mother should have postnatal medical supervision for herself and child.

"Every child should receive periodical health examinations before and during the school period, including adolescence, by the family physician, or the school or other public physician, and such examination by specialists and such hospital care as its special needs may require.

"Every child should have regular dental examination and care.

"Every child should have instruction in the schools in health and in safety from accidents and every teacher should be trained in health programs.

"Every child should be protected from communicable diseases to which he might be exposed at home, in school, or at play, and protected from impure milk and food.

"Every child should have proper sleeping rooms, diet, hours of sleep and play, and parents should receive expert information as to the needs of children of various ages as to these questions.

"Every child must attend a school which has proper seating, lighting, ventilation, and sanitation. For younger children, kindergartens and nursery schools should be provided to supplement home care.

"The school should be so organized as to discover and develop the special abilities of each child and should assist in vocational guidance, for children, like men, succeed by the use of their strongest qualities and special interests.

"Every child should have some form of religious, moral, and character training.

"Every child has a right to a place to play with adequate facilities therefor.

"With the expanding domain of the community's responsibilities for children there should be proper provision for and supervision of recreation and entertainment.

"Every child should be protected against labor that stunts growth, either physical or mental; that limits education; that deprives children of the right of comradeship, of joy, and play.

"Every child who is blind, deaf, crippled, or otherwise physically handicapped should be given expert study and corrective treatment where there is the possibility of relief, and appropriate development or training. Children with subnormal or abnormal mental conditions should receive adequate study, protection, training, and care.

"Every waif and orphan in need must be supported.

"Every child is entitled to the feeling that he has a home. The extension of the services in the community should supplement and not supplant parents.

"Children who habitually fail to meet normal standards of human behavior should be provided with special care under the guidance of the school, the community health or welfare center, or other agency for continued supervision or, if necessary, control.

"Where the child does not have these services, due to inadequate income of the family, then such services must be provided to him by the community.

"The rural child should have as satisfactory schooling, health protection, and welfare facilities as the city child.

"In order that these minimum protections of the health and welfare of children may be everywhere available, there should be a district, country, or community organization for health education and welfare, with full-time officials coördinating with a State-wide program which will be responsive to a nation-wide service of general information, statistics, and scientific research. This should include (a) trained full-time health officials with public-health nurses, sanitary inspection, and laboratory workers; (b) available hospital beds; (c) full-time public-welfare services for the relief and aid of children in special need from poverty or misfortune, for the protection of children from abuse, neglect, exploitation, or moral hazard; (d) the development of voluntary organization of children for purposes of instruction, health, and recreation through private effort and benefaction. When possible, existing agencies should be coördinated."

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